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REPORT

ON THE

FAMINE IN THE CENTRAL PROVINCES

IN

1896 AND 1897.

VOLUME III.

109056

APPENDICES V & VI (P. W. D. SECTION)

BY

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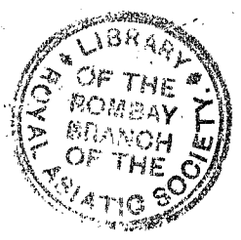

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APPENDIX V.

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WITH

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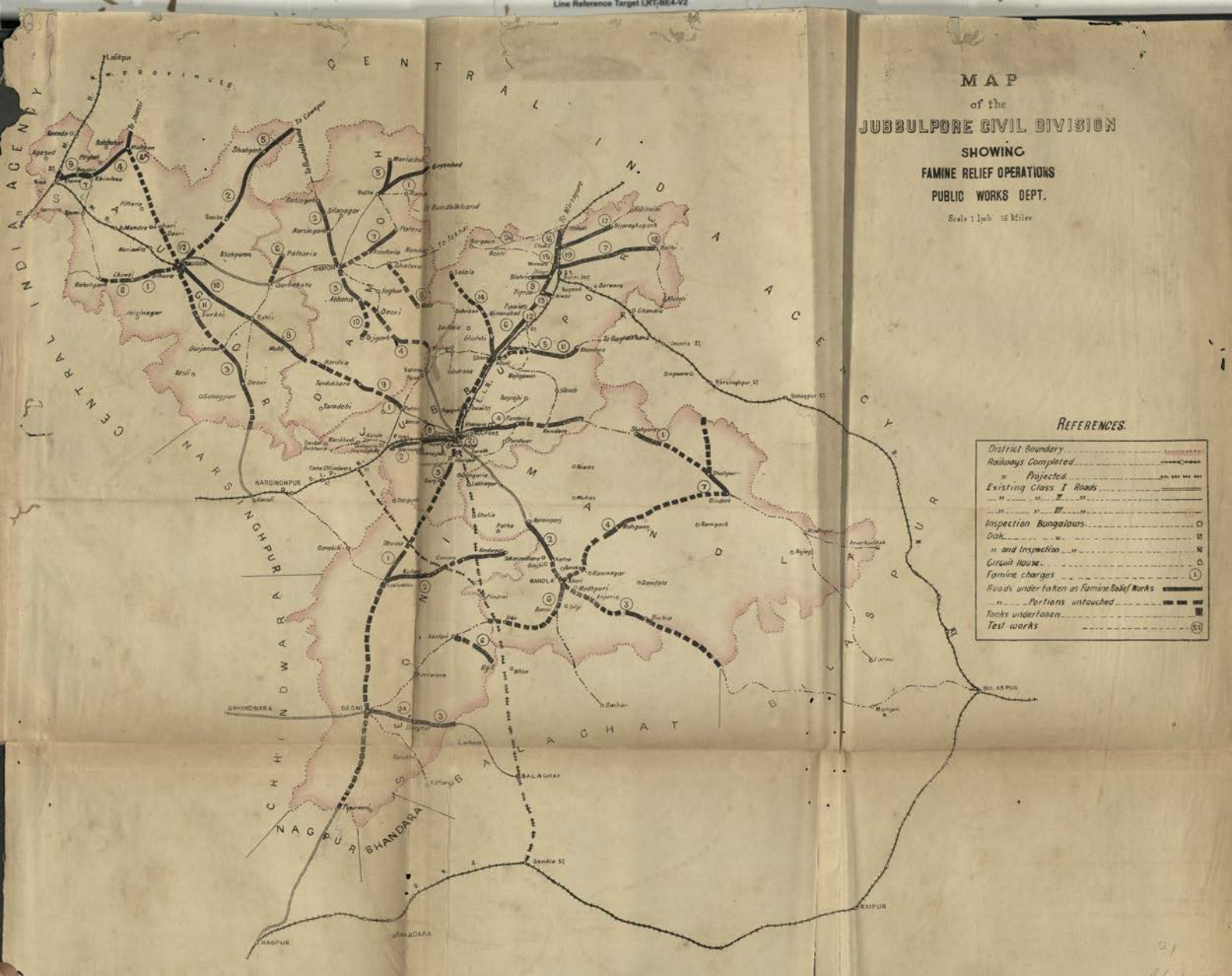

CENTRAL PROVINCES.

Famine Report, Public Works Department Section, by E. E. Oliver, Esq., M. I. C. E., Chief Engineer and Secretary to the Chief Commissioner, Central Provinces, Public Works Department.

Public Works organization adopted.

When in the autumn of 1896 the necessity of providing relief-work on a more or less extensive scale became obvious, one of the first questions that arose was the most suitable Public Works organization to be adopted. This was discussed in a note by the Chief Engineer, dated the 17th October 1896,* addressed with the approval of the Chief Commissioner to all Civil as well as Public Works officers, and to this were added some suggestions for the most useful employment of famine labour.

Engineering staff.

2. It was at the outset obvious that as the ordinary Public Works Divisions covered so large an area, while the available Engineering Staff was so small, a radical change in the supervising organization and a large increase of staff would be necessary, though how great the increase needed did not become apparent until the following summer. Some of the Public Works Charges coincided with the Civil Divisions and included four or more Civil Districts. The Engineers and Upper Subordinates were not numerous enough to provide suitable Sub-Divisional Officers for all these districts in addition to those required to carry on such ordinary Public Works as could not be immediately suspended. Subsequently, when the necessity arose for a very large and rapid extension of relief-works, the difficulty of providing staff of all sorts enormously increased. In some districts it became necessary to establish three Sub-Divisions with a proportionate number of Charges in each, while no sooner had the Department been drained to supply staff for the Civil Divisions of Jubbulpore and Hoshangabad, than a sudden and unexpected demand arose for a greatly increased staff in Chhattisgarh and parts of the Nagpur Division. It was impossible to borrow from other Provinces, nor could either the Training Colleges or the open market meet the whole of these requirements in any adequate way.

No Superintending Engineers are provided in the Provincial cadre, and though for the southern part of the Provinces a Superintendent of Works was temporarily sanctioned, the Executive Engineers of Jubbulpore and Hoshangabad had practically to act, in addition to their own duty, as Superintending Engineers and professional advisers to the respective Commissioners. In many cases selected Sub-Overseers had to be put in as District Sub-Divisional Officers, for others temporary men were recruited, and, in default of any better material, time-keepers, road munshis and others had to be employed as work agents. Of the latter, many had no professional experience or knowledge of the management of labour, and nearly all had in the first instance to be taught everything connected with their work, thus necessitating a tremendous heavy additional call on the time of the small professional staff.

Other Departmental staff.

3. "Officers-in-charge" required for the duties referred to in paragraph 51 of the Central Provinces Code (edition of 1896) were supplied by the Commissioners of Civil Divisions, and in accordance with the orders laid down † were posted to the Public Works Department to act under the orders of the Executive Engineers. It was originally intended that these should be *Naib-Tahsildars* or other permanent officers of similar standing, but, as in the case of 'Work Agents,' the demand exceeded the available supply of suitable men, and after the Revenue, Educational, Police and other Departments had furnished as many as could be spared, some temporary men had still to be recruited. Not a few of these lacked experience in management, in ordinary accounts and in tact, while certain of them proved altogether failures, and a few had to be prosecuted for grave irregularities. If not altogether a case of making bricks without straw, the inadequacy of the staff, and the inexperience of a large portion of it, added very materially to the embarrassments of the situation, the gravity of which developed with an intensity and rapidity that could hardly have been anticipated.

* Public Works Department No. 270—6673, dated the 24th October 1896.

† Circular No. C-74—95, dated the 15th January 1897.

Suitable employment for famine labour.

4. With reference to the Chief Engineer's suggestions for the most useful employment of famine labour, there was not in these Provinces much room for choice. With the single exception of the Saugor-Katni line in progress, there were no great Railway works and no Irrigation work whatever available.

The possibility of providing employment on the construction, enlargement or repair of irrigating or storage tanks was not overlooked. A circular * was issued in communication with the Commissioner of Settlements and Agriculture asking for suggestions as to any possible works of this class. A well-considered scheme, reviewing in advance a series of possible projects, would be very valuable, though it seems doubtful if, in most districts of the Central Provinces, tanks would ever furnish any large amount of suitable employment for Famine relief-workers. In response to the call, a very insignificant number only were found possible at the time, and practically none in the tracts where relief-works were then most urgently called for. It may therefore be broadly said that the construction of new and the improvement of old roads were the only works affording employment on any scale.

Moreover, as pointed out in the Chief Engineer's note of the 17th October, earthwork, the one thing best suited for unskilled labourers and which in other parts of India is the work mainly relied on, offers in the Central Provinces but a limited amount of useful employment. In the black-cotton soil tracts a high bank of earth, without a metalled or well consolidated surface, is liable to become a positive hindrance to traffic; in the hard *muram* tracts the ordinary surface is quite good enough, and banks are only needed for low-lying ground; while on the *ghats*, where new roads are most required to open out the country, it is impracticable to line out a continuous embankment or cutting of any length, a great deal being rock of varying degrees of hardness, requiring more or less skilled and stalwart labour. The original suggestion therefore was to attempt to employ labour upon—

(*a*) The collection and breaking of road metal.
(*b*) The collection and consolidation of suitable *muram*.
(*c*) The harder cutting required for *ghat* work.
(*d*) The approaches to water crossings.
(*e*) The collection of stone for causeways and road dams.

Suitable employment was very largely made available upon (*a*) and (*b*) and in spreading the *muram* collected; in a few cases, by consolidating the metal collected, though it cannot be said that this last was very successful. To properly consolidate hard stone metal heavy rollers are needed, and even consolidation by hand requires more strength and skill than the average famine coolies possess. Under the piece-work system, with the assistance of some little skilled labour—and it may here be noted that skilled labour was equally affected by the prevailing scarcity—much useful work was done of the (*c*) and (*d*) class and occasionally of the (*e*) class.

Average number of day-units employed per mile.

5. Before proceeding further, it will be useful, in connection with this subject, to note the average number of day-units that were provided for on this class of road work. In practice it was found that the actual exceeded the estimated numbers, due presumably to the dependants and non-workers who were counted as provided for against the work. Taking all these dependants and non-workers into account for—

† *I—Earthwork only—*

	Day-units per mile.
An average of 54 roads raised in class gave	13,400
27 estimates for earthwork in construction of ordinary roads, allowing 14 cubic feet per day unit, which was found to be the average throughout the recent operations ...	19,200
But there were actually employed on these	27,600
On harder *muram* soil with occasional boulders ...	39,500
On certain *ghat* roads	68,000

* Public Works No. 272—6756, dated the 27th October 1896.

† *Vide* details given in Appendices B and C.

**II – Metalling—*

A 9″ coat of metal for a 12 feet width requires per mile 47,520 cubic feet. If required for a new road, a part would be soling, and in some soils a greater thickness would be needed. This 9″ might be taken as lasting 5 years, after which a 4½″ coat might be assumed as required for every additional five years. During the recent operations the average metal broken per day-unit of all classes throughout these provinces was 1·8 cubic feet. Therefore this would afford employment for 26,400 day-units per mile on a new road, and half that number for collecting a 4½″ coat on an existing road.

A reasonable average for the quarrying, carting and consolidating of this metal was found to be Rs. 2,000 per mile. This generally had to be done by contract, but if done by Famine labour, and taking the average number of day-units relieved per rupee at 9, the average to which statements work out, this would provide work for an additional 18,000 day-units per mile.

For a 9″ coat of *muram* on a similar road the quantity required would be as above, 47,520 cubic feet. The rate for collecting, spreading and consolidating may be approximately put at Rs. 2 per 100 cubic feet, or Rs. 950 per mile, and taking the average number of day-units relieved per rupee at 9, would equal 9×950 or, say, 9,000 day-units per mile. The life of *muram* is not so good as that of metal, and will vary greatly according to quality. The 9″ coat might be taken as good for 4 years, and an additional 6″ every 4 subsequent years would equal 6,000 day-units.

It must be borne in mind that the numbers would vary widely with the section of the road, the district, the condition of the people and other factors, and that at best an approximation only is possible, but roughly put, this might be as follows: –

Description of Road-work.	Day-units per mile.		
	Unmetalled.	Metalled.	*Muramed.*
An ordinary new *ghat* road with five years' life for metal ...	68,000	112,000	77,000
New road in plain country, but with occasional stiff bits, with metal for five years	39,000	84,000	49,000
Ditto do. with ordinary earthwork and metal for five years	28,000	72,000	37,000
Old roads raised in class, *viz.*, earthen banks made up and metalled or *muramed* to last five years	13,000	57,000	22,000
4½″ renewal coat of metal, good for five years	...	22,000	...
6″ renewal coat of *muram*, good for four years	...	...	6,000

The figures for quarrying, carting and consolidating have been included under metalling, so that in practice these would probably be found too high, but taken as they stand, it will be seen that the earthwork on an ordinary new road would barely provide a Charge of 5,000 relief-workers with employment for 6 days per mile.

Roads carried out as relief-works.

6. On the 20th October 1896 † a call was made upon Executive Engineers to submit, in communication with Commissioners of Divisions, statements showing the roads or other works considered the most suitable to be carried out as relief-works under the Public

* *Vide* details give in Appendices B and C.

† Public Works No. 360-8—J to N., dated the 20th October 1896.

Works Department, whether new roads, the raising of existing ones in class, the collection of *muram* and metal, the breaking of the latter, and such tanks, &c., as would come under the Famine Code classification of "large works." These to be divided as follows:—"Statement A," works which can be undertaken in the event of serious or prolonged famine, but for which estimates and possibly surveys may not be ready; "Statement B," works to be undertaken at once in the nearest approximation to order of urgency for each district, and requiring estimates to be submitted with the least possible delay. These statements were printed off with notes and instructions for each Civil Division as fast as received, additional works being brought forward from time to time into Statement B, which as issued were held to be the Administrative sanctions for proceeding with the different works. The estimates were all prepared and were all sanctioned at the ordinary Public Works rates, increased allotments being given where necessary to cover the difference between these rates and the cost of work carried out by famine labour. In the first instance some of these were little more than approximate mileage rates, for it was occasionally necessary to provide promptly for the employment of labour in badly affected tracts, and the surveys and estimates had to proceed *pari passu* with the setting out of the work, though in all cases orders were issued to follow this as quickly as possible with Stage I Estimates. It will be obvious that, with so much on their hands, officers found very great difficulty in complying with these orders, but it is satisfactory to be able to add that regular estimates for all the relief-works commenced have been duly submitted, checked and sanctioned in proper form.

A copy of the final Statements A and B for the four Civil Divisions is given as Appendix A, columns being added showing the amount of estimates sanctioned and funds allotted. Figures are being worked out to show what it will cost to finally complete all the works commenced, but left unfinished, and to supply the masonry works needed. A scheme will then be drawn up for finishing the most important of these gradually from Provincial and Local Funds. Some idea of the labour involved in the preparation and check of these estimates may be obtained from the figures, which aggregate Rs. 90,63,644 against an expenditure of Rs. 1,07,00,000.

Tools and Plant, Hutting, Special Establishment, Conservancy, &c.

7. The estimates * for (*a*) Tools and Plant were ordered to be submitted by Public Works Divisions, the total expenditure in the first instance being debited to relief funds, the balance of serviceable articles at the close of operations to be brought on to the divisional stock register at market-rates; (*b*) those for Special Establishment to be by Civil Districts as required from time to time and to include only temporary establishment not appearing in the gang registers; and (*c*) those for Hutting, Conservancy and Medical to be also by Civil Districts as required from time to time and to include special temporary establishment exclusive of any appearing in the gang registers. All three of the above to be kept distinct from estimate for works.

General Orders issued in the Public Works Department.

8. Some of the "large works" were in the first instance commenced under Civil Officers, with Public Works Sub-Divisional Officers told off to give professional assistance, but in December 1896 it was finally decided to entrust the entire management of everything in Statement B of the relief-works programme to the Public Works Department. The Chief Engineer was deputed to consult with the North-West Provinces authorities at Allahabad regarding certain details and then to prepare a set of rules and orders which, after approval, were printed off and circulated to all Civil and Public Works Officers as General Order No. C-498, dated the 26th December 1896,† and before the middle of January 1897, the Public Works Officers had taken charge of all large works. The instructions contained in this General Order were followed with very slight variation throughout all the operations, but it may be useful to have for ready reference a list of the principal additions which experience showed to be necessary.

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* Public Works No. 2—1, dated the 2nd January 1897.

† A revised edition modifying Form No. 4 was issued in March 1897.

These were as follows:—

General Order No. 70—715, dated the 1st February 1897, drawing attention to the importance of exacting a full task, perhaps the most difficult of all relief problems to tackle.

General Order No. C-154, dated the 20th March 1897, regarding Inspection Reports and forms to be used. It was found desirable to lay down more precisely what Inspecting Officers should issue orders.

Circular Letter No. 254—2619, dated the 10th April 1897, regarding shelter to be provided for Inspecting and Executive Officers on famine-relief duty.

General Order No. 344—3441, dated the 13th May 1897, requiring monthly reports on Officers-in-charge of relief works, a class of men recruited from several sources and who varied greatly in efficiency and in probity.

Circular Letter No. 354—3491, dated the 14th May 1897, insisting on the prompt submission by Officers-in-charge of cash accounts, the neglect of which in certain cases had led to serious trouble.

Circular Letter No. 357—3572, dated the 17th May 1897: instructions for ascertaining the average cost of work done under famine conditions by relief workers.

Circular Letter No. 481—4444, dated the 1st July 1897: system to be observed in numbering Charges on relief works.

General Order No. 418—4517, dated the 5th July 1897: regarding the classification of labourers.

Circular Letter No. 645-6212, dated the 31st August 1897: regarding famine-relief progress reports.

Circular Letter No. 747-7108, dated the 9th October 1897: instructions regarding preparation of statements showing value of work done under Public Works Department.

Circular Letter No. 752-7180, dated the 13th October 1897: instructions for work under management of Civil Officers.

Piece-work orders issued.

9. In addition to the above a note was drawn up by the Chief Engineer in January 1897* on the introduction of piece-work, with a proposed form of conditions. After certain correspondence with the Government of India in regard to the proposal, orders were issued authorizing its introduction under certain restrictions. These will be found in the following:—

General Order No. 355-3571-A, dated the 15th May 1897.
Circular Letter No. 385-3822, dated the 28th May 1897.
Do. 579-5701, dated the 7th August 1897.
Do. C-645, dated the 17th September 1897.

These may be conveniently referred to as the system of piece-work proper, introduced in certain districts in May 1897, and the system of payment-by-results introduced to a more limited extent at the end of August or the beginning of September 1897.

The orders of May.

10. A cardinal principal of the orders of May was that the system should be confined to the able-bodied, that it should not be introduced at all where the proportion of weak or inefficient labour was large, and that adequate provision should everywhere be made for the balance of weakly or infirm on task-work or infirm-gangs within easy distance. The more responsible District, Public Works Department and Medical staff were specially enjoined to personally see to the proper separation of these two classes. The whole to be subject to the orders of the Commissioners of Divisions, and a gradual introduction was particularly insisted on.

* Chief Engineer's Note, dated 22nd January 1897, and circulated demi-officially.

Within these limits arrangements for giving out work to gangs selecting their own mates, or under reliable large Public Works contractors acting as work agents, or the employment of selected parties of workers upon ordinary road maintenance were permissible, a considerable discretion being given to local officers, even to the extent of deferring or forbidding the introduction on Charges considered unsuitable. Full details of the dates of the introduction,of piece-work, the time it continued, and its effects on workers and the cost of work as far as these can be given, will be found in the statements attached, not merely for each district, but for each relief-work within it. From these it will be seen that on some it was never introduced at all, on others only for a short time, while in a few a modified form of it was successfully maintained throughout. In the Chhattisgarh Civil Division a modified form of it, utilizing the agency of petty contractors, was successfully introduced by Mr. Penny, the Superintendent of Works.

The orders of August.

11. The orders of August 1897 extended the application of payments-by-results as far as the "distinctly robust and strong" were concerned, but limited their earnings to the lowest or D wage. The object of this was to offer no inducement to such persons to remain on relief-works, their labour being at the time urgently required in the fields. They insisted if possible more forcibly than was done in the orders of May on adequate provision for the weakly, the infirm and the dependants of all classes in the shape of task work alongside. The Deputy Commissioner, the Executive Engineer and their respective assistants were particularly charged with the classification of workers, and the necessity for extreme caution laid down in the clearest terms. The orders were made applicable only to a very limited extent in the Nagpur and Chhattisgarh Divisions, where Mr. Penny's rules and orders were approved by both Commissioners. Certain *ghât* work under contractors and other charges in the Nerbudda Division were also exempted, and the consent of the Commissioner was always to be obtained before introduction. The Mandla and Seoni districts were subsequently exempted at the request of the Commissioner, Jubbulpore Division. The orders were never applied in Raipur and only for some ten days in Bilaspur. In the Nagpur Civil Division they were introduced in the Wardha and Nagpur districts in September, and in Bhandara and Balaghat, after personal inspection by the Commissioner, at the beginning of October. In the Nerbudda Division Chhindwara was exempted; in Betul they were introduced on two works only where the workers were said to be in especially good condition; in Hoshangabad, partly in Narsinghpur, and on the one work in Nimar, in September 1897. Everywhere the greatest care was taken to insist on the precautions held necessary to protect the weaker and less robust of the workers, robust persons only being employed on either piece-work or paid by results, the selection being usually made by the Hospital Assistant or Inspecting Officer, in many cases under the eye of either a District Officer or Executive Engineer, or one of their senior Assistants, as will be seen from the detailed statements attached. Task work Charges or infirm gangs were provided alongside every piece-work Charge with two exceptions in the southern sub-division of Jubbulpore, for 14 and 20 days respectively. In both these cases the workers were all in exceptionally robust condition, and the latter had task-work within easy distance specially reserved for any weakly workers needing it.

Effect of piece-work on workers and work.

12. One system or the other was practically in force variously from a few days to six months. In places it was reported as unpopular, in a few it "led to large numbers of able-bodied idlers leaving the works: the majority," continues the Commissioner of Hoshangabad, "were persons who did not require support and could easily manage for themselves." Others again are reported as leaving for ordinary agricultural operations, but nowhere were any ill effects noted on those who remained. The effect in certain cases where large numbers of able-bodied left, was undoubtedly to proportionately reduce the average condition of the remainder, and so may have led to unfavourable reports by Inspecting Officers unacquainted with the whole facts. It is not practicable to review each relief Charge in detail or strike any useful average, but the sum of all the reports goes to show that everywhere the condition even of the weaklings who remained for any time on the works was towards improvement, and in many this was very marked.

As the districts of Mandla, Betul and Bilaspur have been a good deal referred to in public letters and papers, it may be well to refer to the detailed reports of these districts. In Mandla the introduction of piece-work in June was followed by a considerable exodus of robust workers, who had hitherto done very little work for their pay. Later on an increase occurred, but this was of infirm people in bad condition, who were put on task work. The apparent falling off in condition of some of the workers in the Dindori Tahsil in July and August was due to the large numbers of people who up to this had been living in the jungle coming on to the works in the last stage of destitution. In Betul a very careful selection of the able-bodied was made by Sergeant Desmond, one of the best famine officers, assisted by the Hospital Assistant. The system was there also reported popular and the numbers on works did not decrease until the people "left for pressing field work." In Bilaspur the introduction of piece-work had no perceptible effect on the numbers until the limitation to the D wage came in, and even then it is reported that there was no material effect on the condition of the workers: the robust remained so and the weakly ones on task-work steadily improved.

The question as regards the effect on the health of the people has been further dealt with in Revenue Department letters No. F-2016, of the 28th October 1897, and F-151 of the 4th February 1898. As regards its effect on the rates, the supervising establishment, or in regard to general management, in only a few cases was it introduced early enough or maintained sufficiently continuously to enable any safe deductions to be drawn. In those Charges where it was more or less continuously adopted, the out-turn of work was excellent and the results uniformly good. In four charges of the Nagpur District the ratio of cost of work was, as compared with ordinary Public Works rates, as 1·2 is to 1. In Betul, where Sergeant Desmond's methods amounted practically to payment-by-results, the ratio for the whole district is only 1·4 to 1 excluding and 1·6 to 1 including gratuitous relief.

General results of operations.

13. In the case of works extending over some 17 or 18 districts, and varying so widely in character, no useful purpose would be served by attempts to generalize too precisely as to the results obtained in regard to the work done, useful or otherwise, the wages earned, the task exacted or the expenditure incurred. It would be unfair to compare the results of stone breaking under favourable conditions, good organization and careful supervision, at selected quarries near Nagpur or Bhandara, with the results in Raipur, where the officers had to deal with a sudden and unexpected rush of some 70,000 people, coming at the beginning of the hot season, where the establishment was altogether inadequate, the supervision not of the best, work of any sort difficult to find, and the little there was, scattered over long lengths of road for which in some cases surveys did not exist. Nor can an average be usefully struck between the out-turn of work done by enfeebled wanderers drawn from the poor-houses of large towns, or people driven from their jungles by extreme privation, and only reaching the works in a condition almost moribund, and the work done by the hardier labourers or by cultivators who came out merely to earn a little additional wage during the slack season. Figures bringing together results for the whole period during which relief operations lasted in the Central Provinces have been prepared for comparison with other Provinces, but these operations have also been dealt with in the series of attached statements, compiled for each Civil District, with a short memorandum describing the principal conditions affecting it. These statements have been worked out with great care, the details of expenditure being brought up to the closing of the last Relief Work charge at the end of 1897. It should be explained that, as stated in paragraph 8 above, some of the works were commenced under Civil Officers and in some cases it has not as yet been possible to obtain details of the expenditure so incurred. A portion of it seems to have been debited to District Funds, and the Examiner of Public Works accounts can only take cognizance of the sums debited to the Public Works Department.

Accounts on which figures are based.

14. The accounts primarily used as the basis for all calculation are those audited by the Examiner. These were only available up to the end of October 1897, and it was therefore necessary to obtain direct from the Executive Engineers' offices the

booked expenditure to the end of December 1897, including liabilities up to that date. As the last of the relief works Charges was not closed until the 31st December 1897, a special officer was appointed to go round, consult the Executive Engineers on the spot, and in communication with Mr. Lund, the Examiner during the last year, prepare abstracts. Appendix D shows the expenditure booked by the Examiner up to the end of October 1897 compared with the Executive Engineers' returns to the end of December 1897, working up to a total of Rs. 1,02,88,297, excluding a certain proportion of sums paid for Tools and Plant which does not seem properly debitable to Famine expenditure. Minor discrepancies may be found before the accounts are finally audited, but though allowance must be made for a possible margin of error, the figures given may meanwhile be accepted as substantially correct. The figures countersigned by Mr. Lund, Examiner of Accounts, show that from the commencement of operations there was paid in the Public Works Department for famine relief:—

	Rs.
On wages	72,41,337
Gratuitous relief	7,95,247
Special establishment, tools, hutting, &c.	22,51,713
Total ...	1,02,88,297

The difference between this sum and the Rs. 1,07,00,000 gross famine expenditure represents approximately the present value of Tools and Plant.

Statistics of results.

15. For this sum there were relieved, including gratuitous relief given by Public Works Department, and dependants 89,648,190 day-units. Statistical Appendix F shows, arranged by Civil Divisions, by Districts and Public Works Divisions—(1) the areas and population affected; (2) the number of relief Charges and people attending them; (3) the expenditure and percentage of outlay under different heads; (4) the work done per day-unit and per worker on the different classes of work; (5) the total quantities of earthwork, metal and *muram* done on the different classes of roads; (6) the ratio which the cost of such work bears to ordinary departmental rates; (7) the average prices of food-grains, and (8) the district death-rate *per mille.*

Statistical Appendix G is a statement for each district showing the value of the work done by famine labour, the ratio of famine to ordinary rates, the number relieved per rupee, &c., while statistical Appendix H brings together in a convenient form the ratio of famine to ordinary departmental rates taking (1) wages only; (2) wages and miscellaneous; and (3) including all charges.

From these it will be seen that the gratuitous relief given in the Public Works Department amounts to no more than 8 per cent. of the total. The special establishment, tools, hutting, conservancy, &c., cost 22 per cent., the remaining 70 per cent. being spent on wages. The ratio of famine rates compared with ordinary departmental rates was for the whole period of operations in the Central Provinces as 2·3 to 1, or if all gratuitous relief, &c., be included, as 2·5 to 1. Where the supervision was uniformly excellent these figures improve, for instance—

In Betul the ratio is as	... 1·4 and 1·6 to 1
„ Bhandara do.	... 1·7 „ 1·8 „ 1
„ Nagpur do.	... 1·7 „ 1·8 „ 1
„ Seoni do.	... 1·8 „ 1·9 „ 1
„ Chhattisgarh States the ratio is as	... 2·0 „ 2·1 „ 1
„ Chhindwara the ratio is as	... 2·1 „ 2·2 „ 1

The highest were Damoh with 4·4 and 5·2 to 1, and Mandla with 3·7 and 4·2 to 1.

The number of people relieved per rupee was 9. The work done per day-unit relieved comes out as 14 cubic feet of earthwork and 1·8 cubic feet of meta broken. The danger, however, of taking these averages, apart from other important

governing factors, as any safe guide of the work that may be expected, will be seen from the following :—.

Average on all charges in the District of work done during the last year's famine operations in the Central Provinces.

District.	PER DAY-UNIT OF ALL CLASSES.				PER DIGGER OR MALE DAY-UNIT.	REMARKS.
	EARTHWORK CUBIC FEET.		METAL-BREAKING, CUBIC FEET.			
	Maximum.	Minimum.	Maximum.	Minimum.	Earthwork cubic feet.	
Jubblupore ...	16	4	1·7	0·5	44	
Mandla ...	10	3	...	0·5	32	
Seoni ...	30	11	2·1	1·0	92	
Saugor ...	25	4	2·0	0·3	48	
Damoh ...	12	3	3·0	0·3	32	
Nagpur ...	49	12	12·0	2·1	148	This figure relates to a very small quantity done under exceptional supervision with many professional stone-breakers and diggers on the works.
Wardha ...	15	...	...	1·8	72	
Chanda ...	...	...	...	...	...	No work done by Famine labour.
Bhandara ...	28	1*	4·0	0·7	68	* An exceptional figure.
Balaghat ...	22	4	2·0	0·8	52	
Hoshangabad ...	32	5	3·0	0·6	64	
Nimar ...	24	11	...	1·0	84	
Betul ...	18	11	2·0	1·7	68	
Narsinghpur ...	11	5	4·0	0·8	44	
Chhindwara ...	26	7	2·0	2·0	68	
Raipur ...	24	4	2·2	0·5	56	
Bilaspur ...	29	7	2·8	0·7	60	
Sambalpur ...	16	...	...	...	76	
Chhattisgarh States Roads Division.	45	9	2·0	2·0	108	
Average ...	24	6·3	3·2	1·0	68	

which shows that the earthwork done per day-unit of all classes varied from a minimum of 1 cubic foot on some road-side berms in Bhandara to a maximum of 45 cubic feet done on certain roads in Chhattisgarh, and per digger or male day-unit varied from 28 cubic feet in Mandla to 108 in Chhattisgarh, while the day-unit of all classes employed on metal breaking did from 0·3 cubic feet in Saugor to 4 cubic feet in Bhandara and Narsinghpur.

Number and position of relief Charges.

16. The total number of Charges under Public Works Department were :—

For roads	172
Impounding reservoirs	5
Railway or tramway	1
	178

The position of these is shown on the maps attached to District statements, and the dates of opening and closing in each case are given in column 3.

Length and class of new roads constructed.

17. The total length of the new roads constructed or existing roads raised in class is as follows :—

Description.	Unmetalled.	Metalled or Muramed.	Total.
	Miles.	Miles.	Miles.
New roads	150	429	579
Roads raised in class	127	692	819
GRAND TOTAL ...	277	1,121	1,398

18. In regard to these roads constructed or improved as Relief Works it may be said that, with some insignificant exceptions, they will all be of great permanent value to these Provinces. The most of them were selected for construction on account of their utility, and had been entered in the District Road Scheme as part of the programme of desirable Public Works. Detailed remarks giving the opinions of Commissioners and Public Works Officers will be found in the district statements for each road undertaken. Among the more important may be mentioned, in the Jubbulpore Division, an excellent *ghat* constructed on the Patan-Tendukhera road up to the Damoh Plateau, and much useful work done on a continuation of the same alignment between Rehli and Saugor. This only needs the carrying out of short lines to furnish a direct line of communication between Jubbulpore and Saugor. In Damoh the Damoh-Batiagarh and the Hatta-Gaisabad lines were much needed roads, and the latter opens out the northern corner of the district to wheeled traffic. Similarly, the road from Bina Railway Station to Malthon and on to Jhansi will open out the northern corner of the Saugor District. The road from Lakhnadon, in the Seoni District, eastward to Kahani-Kedarpur will, when completed, open out another tract hitherto inaccessible to wheeled traffic, while that from Lakhnadon westward to Narsinghpur connects two important centres.

Value of these roads to the Provinces.

In the Nerbudda Division no more useful work could have been put in hand than the Narsinghpur-Chhindwara road, which when completed will not merely link up two important districts previously cut off by an impracticable *ghat*, but, as the Commissioner writes, "is a great boon to the inhabitants of Chhindwara. It "opens communication with the Nerbudda Valley affording an outlet for produce "and an inlet for trade. It is also a famine protective work as it enables grain "to be brought in from Narsinghpur. It will help to open up the *jagirs* and "will increase the value of land in its neighbourhood. It would be difficult to "find a work of greater public utility or of more enduring benefit." Further west along the Plateau, the Piparia-Matkuli-Chhindwara road has been practically raised to a first class road throughout, and puts the head-quarters of the last-named district in touch with the Great Indian Peninsula Railway. The Betul-Elichpur road opens out an important trade route with the Berars, and the Betul-Harda road will ultimately link the District head-quarters with a second point on the Railway. The value of the short feeder lines at right angles to the Railway, which had to be undertaken to provide immediate employment for labour in the Nerbudda Valley, is somewhat discounted by the difficulty of finding suitable material to make up a hard surface; but of these the Gadarwara-Sainkhera, the Narsinghpur-Sankal and the Harda-Handia are exceptionally valuable railway feeders. In the Nagpur Division the Balaghat-Baihar *ghat* road will, when complete, afford a much-needed outlet for the produce of the Baihar Tahsil, and the roads from Balaghat by Lanji and on to Amgaon Railway station and from Lalbarra on the Balaghat-Seoni road to Tumsar Railway Station connect rich rice tracts with the Bengal-Nagpur Railway system.

In the Chhattisgarh Division, from the last-named Railway system, the Rajnandgaon-Antagarh and the Drug-Balod on the south, while to the north the Drug-Dhamda-Bametara, the Dhamda-Gandai, the Tilda-Simga up to the borders of the Kawardha State, the Bhatapara-Laun-Pauni, the Bhatapara-Mungeli and the Kota-Lormi up to the Pandaria State, with sundry shorter lengths, are all valuable railway feeders, and will do much to develope this fine grain tract. They have not all been completed, but much useful work has been done, and as funds permit the remaining work will be gradually taken in hand.

Some of these require additional masonry works before they can be classed as thoroughly useful roads, but there is every hope that within a few years these can gradually be carried out from the ordinary Provincial Public Works grant, and so long as funds can be made available for their repairs and up-keep there can be no question of their very great permanent value. It may therefore be confidently said that a very considerable portion of the expenditure incurred on these relief-works will materially contribute towards the prosperity and the further development of the Central Provinces, and, in the most literal sense, furnish additional protection against famine in the future.

Impounding Reservoirs.

19. The impounding reservoirs or tanks undertaken by the Public Works Department were insignificant in number and size. There were a few in the Chhattisgarh Feudatory States and zamindaris, and some 8 or 10 in the Baihar Tahsil of the Balaghat District. The particulars available are given in the district statements: the total expenditure appears to have been under Rs. 50,000; only one or two can be said to be completed, and masonry regulators will probably be needed in all cases where it is proposed to use the water for irrigation.

Importance of keeping up a programme of works.

20. The conclusions that may be drawn from the experience gained during the last year's famine operations, will probably vary with the standpoint taken up, but the importance of having always ready a programme of large useful works that might at any time be put in hand is undoubted. The statements A and B, referred to in paragraph 6 above, were found invaluable and, so far as they had been worked out, enabled operations to be commenced with confidence and the knowledge that money would not be actually wasted. If sufficient care is taken there should be no great difficulty in keeping such statements up, and adding from time to time works in the place of those struck out as completed. The maintenance of metalled and *muramed* roads is a yearly recurring necessity, and that a great deal can be done in this way by famine labour has been amply proved.

Profitable form of work.

21. It will also hardly be disputed that it is more profitable to employ famine labour upon really useful works, even though this involves some additional cost for materials, or the carriage of materials, than upon works the utility of which is very questionable. Thus, it is better to employ the labour upon metal breaking on an important existing line of communication than to start desultory works on new extensions. Something may of course have to be paid for carting and for skilled labour for consolidation, but the classes employed on both the latter equally feel the pinch of high prices during a season of scarcity. If it is assumed that labour can be moved even moderate distances, it can generally be moved to selected works of this class. Further, it can hardly be disputed that the supervision of a few large camps must in every way be more thorough and satisfactory than is possible for many small ones.

Notice of officers employed.

22. A reference has been made in paragraph 2 to the enormously heavy work that fell upon the Engineering and subordinate staff, and it may be said that in nearly every case the call was met in the most loyal and hearty manner. Where all worked so well it is perhaps invidious to select, and it would be easier to enumerate the few who failed to come up to the very high standard demanded.

No one could have worked harder or shown more energy than Mr. Penny, who as Superintendent of Works never spared himself, and spent the most of the hot season in camp personally organizing relief operations, and remedying as far as possible the weak places, in Chhattisgarh and Balaghat, where the sudden and unexpected call for additional works taxed to the utmost the resources of the Department.

Among others Mr. Leventhorpe, upon whom fell the brunt of all the initial difficulties in the Jubbulpore Division, Mr. Leslie in Saugor, Messrs. St. Clair and White in Hoshangabad, Mr. Harriott in the Chhattisgarh States, Mr. Leefe, whose lamented death at his post left a very unfortunate vacancy, and Mr. Prayag Dass in Narsinghpur, were all conspicuous for unsparing energy and excellent work; and Mr. Lugard never spared himself in Bhandara.

Among the upper subordinates Mr. Meehan in Nagpur, Mr. McQuillen in Bhandara, Messrs. Willford and Fitzpatrick in Jubbulpore, Mr. Maskar in Raipur, Mr. Gadgil in Bilaspur, Lalla Chandi Pershad in Seoni, Mr. Banerji in Chhindwara and Sergeant Desmond in Betul, all rendered valuable service. Of the last named, Sergeant Desmond, whose management of the Betul District throughout the operation left nothing to be desired, it is impossible to speak too highly.

Very high praise is also due to Mr. St. Clair, the Under Secretary, for the energy with which he grappled with the mass of work that flooded the Public Works Secretariat during the whole year. Latterly he has found a very valuable Assistant in Mr. Mitra, who has had in hand the preparation of statistical results; and lastly, much credit is due to Mr. Bailey, the office Superintendent and his staff, who may be said to have been for 12 months kept at continuous high pressure, and who have met all calls upon them most cheerfully.

JUBBULPORE DISTRICT.

Relief operations from December 1896 to November 1897.

Brief account of Famine relief operations.

1. Famine relief operations were started early in December 1896, and closed by the middle of November 1897. There were in all 20 relief Charges, the average distance between any two Charges being 11 miles. Labour was principally employed on raising existing roads in class, the only new roads undertaken being the Patan-Tendukhera and Piprod-Niwar Roads. Metal was also collected for repairs to the Great Northern Road which connects Jubbulpore and Nagpur. The works were all carried out under the Public Works Department with the exception of the Sehora-Khamtara and Sehora-Salaia Roads which were handed over to the Civil Department about the middle of August 1897. The total length of road-work carried out by famine labour was 144 miles. The average daily attendance on each Charge was over 2,000, or nearly 1 out of every 18 of the population residing within the area served. The total number of day-units relieved from the commencement to the close of operations was over 8½ millions, and the total expenditure, including all charges, over 7¼ lakhs of rupees. The following table exhibits the broad facts connected with the operations in this district :—

Particulars.	Jubbulpore District (20 Charges.)	Average per Charge.	Remarks.
Total area	3,948	197 Sq. miles.	The whole area was affected.
Affected area served	3,948	197 „ „	
Total population	748	37·4 thousands.	
Affected population served ...	748	37·4 „	
Average daily attendance ...	40·6	2·03 „	
Total No. of day-units relieved ...	8·52	0·43 millions.	
	Rs.	Rs.	
Total Expenditure	7·31	0·37 lakhs.	
	Cft.	Cft.	
Total Earth-work executed ...	116·8	5·8 „	
„ Metal collection ...	13·7	0·7 „	
„ *Muram* „	39·3	2·0 „	
„ Consolidation	19·2	1·0 „	
	No.	No.	
„ Length of road-work ...	144	7·2 miles.	

Condition of Relief-workers. General observations as to management, &c.

2. The proportion of feeble persons and non-workers was considerable; the ratio of persons gratuitously relieved to those who performed any task at all, however nominal, being 1 : 5. On an average the "diggers"* or male units and "carriers" or female and child units were in the proportion of 1 : 3 approximately. Sickness prevailed more or less generally; one Charge in particular (Jubbulpore-Kundam Road) suffered severely from a sharp outbreak of cholera. The death rate during famine was 74·2 per mille against 35·1 normal, or more than double. The management was on the whole very satisfactory; the Central Sub-Division (under Mr. Reid) alone being badly conducted. No contractors were employed anywhere, and every item of work was carried out entirely by famine labour, including carriage of metal and *muram*. This, together with the influx of a large number of paupers from the adjoining Native States in a more or less emaciated condition, accounts for the high ratio of famine to ordinary rates of work. Only men and women were fined for short

*Using the Code terms.

work; the penal wages being one pice less than D wages. The children were not fined.

System of work.

3. Works were at first all started on the task-work system. Piece-work was gradually introduced in 17 out of the 20 Charges between May and September 1897; on the remaining three the task system continued to the end. Except in two cases for short periods,* infirm gangs were maintained side by side for the weakly, able-bodied persons only being employed on piece-work. The effect of its introduction was generally to considerably reduce the numbers of able-bodied workers, and it was to this diminution in the number of able-bodied that the deterioration in the condition of the "average" workers, reported by some Inspecting Officers, was due. In several cases task-work only was re-introduced; and the piece-work system being in force so short a time, no definite conclusions can be drawn as to its influence on the out-turn of work. It may, however, be unhesitatingly stated that its introduction had no injurious effect on the condition of the workers themselves. In the remarks column of the abstracts attached the effects have been noted for each individual work. From the figures given below it will be seen that the task-work Charges, and Charges on which piece-work was latterly brought into force, yielded on the whole practically identical results :—

System of work.	Ratio of famine to ordinary rates of work.		Remarks.
	Inclusive of gratuitous relief.	Exclusive of gratuitous relief.	
Task-work	2·38	2·12	
Task and piece-work	2·39	2·13	

Expenditure.

4. The total expenditure incurred and number of day-units relieved were Rs. 7,30,239 and 8,517,614 respectively; the percentage of total outlay being made up as follows :—

Percentage of wages, gratuitous relief and miscellaneous charges.

Wages	69
Gratuitous relief	9
Miscellaneous	22
	100

Expenditure per day-unit inclusive of all charges.

The expenditure per day-unit, inclusive of all charges, was :—

Maximum	...	18 pies (or 11 per rupee)
Minimum	...	13 „ („ 15 „ „)
Average	...	16 „ („ 12 „ „)

Average expenditure per day-unit excluding "miscellaneous" but including wages and gratuitous relief.

The average expenditure per day-unit excluding cost of special establishment, hutting, conservancy, tools and other miscellaneous charges was 13 pies against 16 pies inclusive of all charges.

Average wages earned.

The average wages earned were approximately as follows :—

Per worker	...	14 pies.
„ dependant	...	9 „

Average price of food-grains

the average price of food-grains being 9 seers per rupee against 15 seers per rupee normal.

Work done.

5. The out-turn of work for the two principal items, *viz.*, (I) Earthwork ordinary, and (II) Metal-breaking, is given below. "Earthwork ordinary" denotes earthwork in cuttings or banks or earthen sides of roads in ordinary black or brown soil, the horizontal lead and vertical lift being 50 ft. and 5 ft. average respectively, which is equivalent to a

* *Viz.* Mirganj-Jhansighat Road from June 23rd to July 8th, and at Satpula from June 24th to July 15th; the people being all in exceptionally robust condition.

"reduced lead" of 146 ft. according to Mr. Higham's standard* and 186 ft. according to the Central Provinces standard.†

Particulars.	(I). Earth-work ordinary.	(II). Metal-breaking.	Remarks.
1. Per day-unit:	Cft.	Cft.	
Maximum	16	1·7	
Minimum	4	0·5	
Average	9	1·0	
2. Per worker:			
Average	11	1·2	
3. Per digger or male unit:			
Average	44	...	
4. Per carrier or female and child-unit:			
Average	15	...	

Ratio of famine to ordinary rates of work.

6. The ratio of famine to ordinary rates works out as follows:—

	Maximum.	Minimum.	Average.
Including gratuitous relief ...	4·80	1·40	2·70
Excluding „ ...	4·60	1·20	2·50

Excluding the Charges in the Central Sub-division which, as stated above, was badly managed, the average ratio for the District comes out as follows:—

Including gratuitous relief ...	2·40
Excluding „ ...	2·10

Permanence and utility of works.

7. The works carried out are all, on the whole, useful and of a permanent character, as will be seen from the Commissioner's ‡ remarks received with Executive Engineer's No. 62/88, dated 6th January 1898. A capital *ghât* has been made up on to the Damoh Plateau (Patan-Tendukhera Road) and several important existing roads have been improved. All the metal collected will be used up on the roads in the course of ordinary maintenance; some of it has been already utilised. The only work of a doubtful character is the Sehora-Khamtara Road, which has been left in an unfinished condition, and which when completed will only be useful in opening up the forest tracts in this part of the District.

* *Vide* Mr. Higham's Appendix I.
† *Vide* C. P. Code, Appendix VII.
‡ *Vide* copy annexed.

Commissioner of Jubbulpore's opinion on the permanence and utility of works in the Jubbulpore District.—(Received with Executive Engineer, Jubbulpore's No. 62/88 dated 6th January 1898.)

No.	Name of work.	Opinion of Executive Engineer.	Opinion of Commissioner.
1	Chaka-Bijeraghogarh Road ...	This road, formerly a country track, has now been raised and *murammed*. It will be of great service to this part of the district.	Very useful. Two miles remain to be *murammed*, and will be completed by the District Council.
2	Katni-Barhi Road ...	A great portion of this road has also been raised and *murammed* and will be of great use.	Useful, but not so useful as the foregoing: it runs through jungle for a great portion of its length. Some ten miles at the Barhi end are unfinished. During the earlier months of the famine some metal was collected for which no use will be found.
3	Jubbulpore-Mirzapur Road ...	Along this road from near Sleemanabad to the border of the district, a large amount of metal and *muram* has been collected in places, and in many miles the *muram* has been put down and consolidated. The road has been much improved in places.	The road was in generally good order as a *murammed* road before it was touched, and I doubt whether the metal which has been collected will be put to use. But the *muram* collection to which work was latterly restricted will be very useful indeed for future maintenance.
4	Ballast breaking for the I. M. Railway ...	A work was started in the beginning of the rains to the west of Katni. A small quantity of ballast was broken but very few people came to the work and it was soon closed. The ballast will be sold to the Indian Midland Railway.	The metal has been taken over by the Railway Company.
5	Jhingri-Bilheri Road ...	This road, formerly a country track, has now been raised and *murammed* throughout. A useful work.	Very useful indeed. Executed since April and carried to completion by a Charge transferred by the Deputy Commissioner from the Mirzapur Road.
6	Piprod-Niwar Road ...	A new line of road has been made from the Jubbulpore-Mirzapur Road at Piprod to the Niwar Railway station. It has been banked and *murammed* throughout. It should be a useful Railway feeder road.	A useful railway feeder has been completed. It was also made by a Charge transferred from the Mirzapur Road.

Commissioner of Jubbulpore's opinion on the permanence and utility of works in the Jubbulpore District.—(*Received with Executive Engineer, Jubbulpore's, No. 62/88 dated 6th January 1898.*)—(Concluded).

No.	Name of work.	Opinion of Executive Engineer.	Opinion of Commissioner.
7	Sehora-Salaia Road ...	This road was under construction by ordinary contract labour, but between Bahoriban and Salaia a good deal of *muram* has been collected by famine labour. This will all be used on the road.	One of the Mirzapur Road Charges was transferred here to much advantage. The road was taken up apart from the famine and will be when finished of much utility.
8	Sehora-Khamtara Road (Umaria-Khamtara Section.)	A good deal of earthwork, &c., has been done from Umaria on towards Khamtara. This road when completed may be of use in opening up the forests in this part of the district.	A new alignment was taken through the jungles and the road now comes to an end in the jungles, some six miles being left untouched. The least useful piece of famine road work in the Jubbulpore District.
9	Patan-Tendukhera Road ...	The earthwork has been completed from Patan to the Damoh border. There is some heavy *ghât* work on this length which has been well carried out. This should be a very useful work, as formerly it was quite impossible for carts to get up on to the Damoh plateau from this part of the district.	A capital *ghât* has been made up on to the Damoh plateau. At present the road is blocked by the incomplete work at the Hiran crossing, and four or five miles rough roadway must be made on to the top of the *ghât* to join up with the Tendukhera Road. When this is done the expenditure which has been incurred will bring useful results.
10	Mirganj-Jhansighat Road ...	From Mirganj to Shahpura the road surface was formerly below the level of the fields on either side. It has now been raised and kunker soling collected and consolidated, and culverts and causeways repaired. A very useful work.	A good road of great utility.
11	Jubbulpore-Mirganj Road ...	From Garha to Mirganj was formerly only *murammed* and got very much cut up by heavy traffic. This length has been metalled throughout and metal for further repairs broken and collected. A work of great utility.	Also very useful. Really forms one road with the above.

12	Jubbulpore-Kundam Road ...	The work was first started near Kundam and a good deal of metal and *muram* collected there. This will probably be of little use as the traffic there is light, and it is not likely that this portion of the road will be metalled. The work was then moved to Khamaria and a good deal of useful work was done in metalling the first portion of the road, the traffic on which is very heavy.	Incomplete. Useful work has been done at the Jubbulpore end.
13	Metal breaking at Satpula ...	This work was originally under the Municipal Committee but was taken over by the Public Works Department in June. A large amount of metal has been broken and much has been used on the roads in and around Jubbulpore. The balance will be sold as ballast to East Indian Railway.	The metal which has been collected here will gradually be utilized. Some of it has been already used in Jubbulpore.
14	Jubbulpore-Seoni Road (Great Northern Road)	Metal breaking and *muram* collection has been done in several miles of the Great Northern Road between the Nerbudda River and Bargi. This will all come in use for the ordinary repairs to the roads.	A very large quantity of metal has been collected, but the road is a metalled one and the material will be gradually used in maintenance.

JUBBULPORE

Abstract statement of Value

Sub-Division and name of Sub-Divisional Officer.	No. of Charge.	Name and class of work, and dates commenced and closed.	Value of work done at normal P. W. D. rates.	Total expenditure and No. of units relieved.			Percentage of gratuitous relief and special establishment, &c., over total expenditure.	
				Total expenditure including gratuitous relief.	Total expenditure excluding gratuitous relief.	Total number of relief workers.	Gratuitous relief.	Special establishment, tools, hutting, &c.
1	2	3	4	5	6	7	8	9
			Rs.	Rs.	Rs.	No.	Percentage.	Percentage.
Southern Sub-Division. Mr. P. FitzPatrick, Sub-Engineer.	1	Patan-Tendukhera Road ... **N. R. 5 Miles.** From 21st December 1896 To 16th October 1897.	36,644	52,157	43,372	583,289	17	20
	2	Mirganj-Jhansighat Road ... **R. C. 8 Miles.** From 14th December 1896 To 13th October 1897.	46,094	1,09,033	99,638	1,212,827	10	13
	3	Great Northern Road ... **R. P. 4 Miles.** From 2nd February 1897 To 9th November 1897.	11,295	38,307	31,080	542,045	19	18
	4	Jubbulpore-Kundam Road * ... **R. C.** From 16th December 1896 To 18th October 1897.	18,417	61,012	52,133	722,498	15	18
	9	Marble Rocks Road, 2nd section ... **R. C. 5 Miles.** From 23rd December 1896 To 19th June 1897.	21,662	51,230	44,040	536,242	14	18
	21	Jubbulpore-Kundam Road, 1st Section.* **R. C.** From 1st June 1897 To 30th October 1897.	20,414	35,889	28,848	429,681	20	19
		Totals and averages for Southern Sub-Division ...	1,54,526	3,47,628	2,99,111	4,026,582	14	18
Northern Sub-Division. Mr. C. Willford, Supervisor.	7	Katni-Barhi Road † ... **R. C.** From 28th February 1897 To 26th June 1897.	11,465	27,543	26,317	299,614	5	19

* Charges 4 and 21 together 15 miles.
† *Vide* Charge No. 18.

DISTRICT.

of Work done by Famine Labour.

Ratio of Famine to ordinary rates.		Work done and expenditure incurred per unit relieved,			* Duration of work.	Remarks.
* Including gratuitous relief.	Excluding gratuitous relief.	Number of units relieved per rupee.	Work done per unit relieved per diem.			N. R.....New road. R. C.....Raised in class. R. P.....Repairs. S. T.....Test work. P. W.....Piece-work. T. W.....Task work. N. B.—"Earthwork, ordinary" denotes earthwork in banks or cuttings or earthen sides of roads in black or brown soil; average lead and vertical lift being 50 ft. and 5 ft., respectively.
			Earthwork ordinary.	Metal breaking.		
10	11	12	13	14	15	16
Ratio.	Ratio.	No.	Cft.	Cft.	Months.	
1·40	1·20	11	16	1·7	10	**T. W.** from 21st December 1896 to 24th September 1897, **P. W.** from 25th September 1897 to 16th October 1897. This work was very well managed throughout. Some very heavy ghat work was done, retaining walls were built and the banks were made up mainly of stones. No contract work on this or any relief work in the Jubbulpore District. Introduction of piece-work had practcially no effect on the numbers which had been gradually falling for weeks before introduction.
2·40	2·20	12	11	1·2	10	**T. W.** from 14th December 1896 to 22nd June 1897, **P. W.** from 23rd June 1897 to 13th October 1897. As no *muram* could be got, kankar was collected near the Nerbudda river and carried by coolies to the road about 3 miles off. The metal collected by Charge No. 9 was consolidated during the rains on the Marble Rocks Road by this Charge. About 30 per cent. of the people left work on introduction of piece-work; then remained fairly stationary. Infirm gangs were added a fortnight after introduction of piece-work.
3·40	2·80	15	...	0·6	9	**T. W.** from 2nd February 1897 to 14th August 1897. **P. W.** from 15th August 1897 to 28th August 1897. **T. W.** from 29th August 1897 to close of work. Proportion of feeble and emaciated persons very large. During the last few months a large number of paupers from Native States were sent from Jubbulpore Poor-house who practically did no work. Piece-work in force only for a fortnight. People left in large numbers. Task-work was re-introduced and lasted to close of work.
3·30	2·80	12	7	0·7	10	**T. W** from 16th December 1896 to 16th August 1897 **P. W.** from 17th August 1897 to close of work. Camp had to be shifted in March for convenience of water supply. There was a sharp outbreak of cholera and a great portion of the Camp had to be burnt down. The men left in large numbers immediately piece-work was introduced and went to work in the fields and elsewhere. Women and children remained.
2·40	2·00	11	...	1·1	6	**T. W.** from 23rd December 1896 to 19th June 1897, **P. W.** never started. The numbers at Sahajpur increased so rapidly that this was opened as a 2nd Charge and metal collection for the Jubbulpore-Marble Rocks Road put in hand.
1·7	1·4	12	15	1	5	Taken over from Municipality on 1st June 1897. **T. W.** till 23rd June 1897. **P. W.** from 24th June 1897 to close of work. A large quantity of metal was broken and 5 miles of consolidation done on the Kundam Road. This Charge mainly consisted of beggars and unemployed labourers from the city of Jubbulpore. On introduction of piece-work numbers went down by half and then remained steady. Infirm gangs co-existed except for a short period.
2·2	1·9	12	12	1·0	8	
2·40	2·30	11	...	1·0	5	**T. W.** Taken over from civil authorities on 28th February 1897. **P. W.** Never started.

Abstract statement of Value

Sub-Division and name of Sub-Divisional Officer.	No. of Charge.	Name and class of work, and dates commenced and closed.	Value of work done at normal P. W. D. rates.	TOTAL EXPENDITURE AND NO. OF UNITS RELIEVED.			PERCENTAGE OF GRATUITOUS RELIEF AND SPECIAL ESTABLISHMENT, &C., OVER TOTAL EXPENDITURE.	
				Total expenditure including gratuitous relief.	Total expenditure excluding gratuitous relief.	Total number of relief-workers.	Gratuitous relief.	Special establishment, tools, hutting, &c.
1	2	3	4	5	6	7	8	9
			Rs.	Rs.	Rs.	No.	Percentage.	Percentage.
Northern Sub-Division.—(concld.) Mr. C. WILLFORD, Supervisor.	8	Jhingri-Bilheri Road ... **R. C. 5 Miles.** From 25th February 1897 To 18th October 1897.	10,346	21,326	25,960	333,445	8	21
	16	Jubbulpore-Mirzapur Road Kailwara Section.* **R. C.** From 22nd February 1897 To 31st March 1897.	1,489	5,069	4,888	56,070	4	18
	17	Chaka-Bijeraghogarh Road ... **R. C 16 Miles.** From 7th February 1897 To 19th June 1897.	12,471	28,294	27,467	298,333	3	18
	15 & 19	Jubbulpore-Mirzapur and Chaka-Bijeraghogarh Roads.* **R. C.** From 1st February 1897 To 15th October 1897.	14,690	41,936	39,334	469,959	6	20
	18	Katni-Barhi Road, 2nd Section†... **R. C.** From 4th April 1897 To 23rd October 1897.	12,804	41,656	40,127	464,415	4	19
	20	Metal breaking at Deogaon for Indian Midland Railway. From 12th July 1897 To 22nd August 1897.	587	1,433	1,367	16,380	5	31
		Totals and averages for Northern Sub-Division.	63,852	174,257	165,460	1,938,216	5	19

* *Vide* Charge No. 13.
† Charges 7 and 18 together 29 miles.

DISTRICT.

of Work done by Famine Labour.

Ratio of Famine to ordinary rates.		Work done and expenditure incurred per unit relieved.			Duration of work.	Remarks.
Including gratuitous relief.	Excluding gratuitous relief	Number of units relieved per rupee.	Work done per unit relieved per diem.			N. R.....New road. R. C.....Raised in class. R. P.....Repairs. S. T.....Test work. P. W.....Piece-work. T. W.....Task-work. N. B.—"Earthwork, ordinary" denotes earthwork in banks or cuttings or earthen sides of roads in black or brown soil; average lead and vertical lift being 50 ft. and 5 ft., respectively.
			Earthwork ordinary.	Metal breaking.		
10	11	12	13	14	15	16
Ratio.	Ratio.	No.	Cft.	Cft.	Months.	
2·70	2·50	12	9	1·0	8	**T. W.** from 25th February 1897 to 14th August 1897. **P. W.** from 15th August 1897 to close of work. Only two quarries were near the road. The others were more than a mile off. On introduction of piece-work numbers decreased at first but rose again in a few weeks.
3·40	3·30	11	...	...	1	**T. W.** From 22nd February 1897 to 31st March 1897. **P. W.** never started. The work was of very short duration and Charge moved to Katni-Barhi Road (Nos. 7 and 18)
2·30	2·20	11	....	1·1	4	**T. W.** From 7th February 1897 to 21st May 1897. **P. W.** from 22nd May 1897 to close of work. *Muram* and stone found close to the road. Rates are therefore low. Numbers decreased immediately piece-work was brought into force. Scarcely any piece-workers remained.
2·90	2·70	12	...	0·9	9	Charge No. 15 **T. W.** from 1st February 1897, to 17th April 1897, when it closed. Charge No 19 **T. W.** from 15th April 1897. **P. W.** from 19th May 1897 to 15th October 1897. Work done as follows:— 1. *Muram* collection at Chaka for part of the Mirzapur Road. 2. Completing tank at Kanhwara began by the Civil Department. 3. *Muram* collection, carting and consolidation on the Chaka-Bijeraghogarh Road. Numbers decreased immediately piece-work was brought into force. Scarcely any piece-workers remained.
3·20	3·10	12	7	0·7	7	**T. W.** from 4th April 1897 to 21st August 1897. Handed over to Circle Relief Officer on 23rd August 1897. **P. W.** from 22nd August 1897 to 4th September 1897. **T. W.** from 5th September 1897 to 23rd October 1897. Condition of workers on this Charge was worse than the average. Numbers went down and piece-work was stopped after very brief duration; task-work being then reintroduced.
2·40	2·30	12	...	0·7	1	**T. W.** from 12th July 1897 to 19th August 1897. **P. W.** from 20th August 1897 to 22nd August 1897. The numbers were always very small and the work was soon stopped.
2·7	2·6	11	8	0·9	5	

Abstract statement of Value

Sub-Division and name of Sub-Divisional Officer.	No. of Charge.	Name and class of work, and dates commenced and closed.	Value of work done at normal P. W. D. rates.	Total expenditure and No. of units relieved.			Percentage of gratuitous relief and special establishment, &c., over total expenditure.	
				Total expenditure including gratuitous relief.	Total expenditure excluding gratuitous relief.	Total number of relief-workers.	Gratuitous relief.	Special establishment, tools, hutting, &c.
1	2	3	4	5	6	7	8	9
			Rs.	Rs.	Rs.	No.	Percentage.	Percentage.
Central Sub-Division. Mr. Fitzpatrick, Sub-Engineer, up to 28th February 1897. Mr. Reid, Supervisor, up to 24th August 1897. " Willford " 1st October 1897.	5 & 11	Sehora-Khamtara Road, Umaria Khamtara Section. **R. C. 11 miles.** From 4th January 1897 To 29th October 1897.	15,167	67,476	64,392	866,411	5	29
	6 & 12	Jubbulpore-Mirzapur Road * .. **R. C.** From 6th January 1897 To 31st October 1897.	24,932	95,824	92.098	1,094,170	4	30
	13	Jubbulpore-Mirzapur and Piproá Niwar Roads. † **R. C. & N. R.** From 11th March 1897 To 2nd October 1897.	6,465	31,338	29,779	491,128	5	27
Central Sub-Division. Mr. Reid, Supervisor, up to 24th August 1897. " Willford " 30th September 1897.	14	Sehora-Saloia Road ... **R. C. 4 miles.** From 20th April 1897 To 30th September 1897.	3,522	13,716	13,065	* 191,107	5	30
	10	Jubbulpore-Mirzapur Road, 2nd Section.	**Not opened.**					
		Totals and averages for Central Sub-Division..	50,086	208,354	199,284	2,552,816	4	29
		Totals and averages for the whole District of Jubbulpore.	268,464	730,239	663,855	8,517,614	9	22

* *Vide* Charge No. 13.

† Charges 13, 15 & 19, 16 and 6 & 12 together 38 miles.

DISTRICT.

of Work done by Famine Labour.

Ratio of Famine to ordinary rates.		Work done and Expenditure incurred per unit relieved.			Duration of work.	Remarks.
Including gratuitous relief.	Excluding gratuitous relief.	Number of units relieved per rupee.	Work done per unit relieved per diem.			N. R.....New road. R. C.....Raised in class. R. P.....Repairs. S. T.....Test work. P. W.....Piece-work. T. W.....Task-work. N. B.—"Earthwork, ordinary" denotes earthwork in banks or cuttings or earthen sides of roads in black or brown soil; average lead and vertical lift being 50 ft. and 5 ft., respectively.
			Earthwork ordinary.	Metal breaking.		
10	11	12	13	14	15	16
Ratio.	Ratio.	No.	Cft.	Cft.	Months.	
4·50	4·30	13	4	0·5	10	Charge No. 5 **T. W.** from 4th January 1897 to 25th May 1897, when it was closed. Charge No. 11 **T. W.** from 28th March 1897. Handed over to Circle Relief Officer on 15th August 1897. **P. W.** from 6th May 1897 till it was closed on 29th October 1897. Work badly managed for some time by Officer-in-charge and Work Agent. The people did little work, and rates work out very high. Piece-work reduced numbers considerably.
3·80	3·70	12	7	0·6	10	Charge No. 6 **T. W.** from 6th January 1897 to 19th June 1897. Re-opened 23rd July 1897. **P. W.** from 23rd July 1897 to 31st October 1897. Charge No. 12 **T. W.** from 22nd January 1897 to 27th April 1897, when it was closed. A good deal of work consisted of carriage of metal by head loads, which being much more expensive than carting, accounts for the high Famine rates.
4·80	4·60	13	5	0·5	7	**T. W.** from 11th March 1897 to 27th June 1897. **P. W.** from 28th June 1897 to 2nd October 1897. Work badly managed by the Officer-in-charge and so rates work out very high. *Effect of piece-work in reducing numbers very* slight.
3·90	3·70	14	...	...	5	Managed by Circle Relief Officer from 19th August 1897 till it was closed. **T. W.** from 20th April 1897 to 22nd June 1897. **P. W.** from 23rd June 1897 to 30th September 1897. Numbers had been falling prior to introduction of piece-work and went down still further afterwards.
4·2	4·0	12	5	0·5	8	
2·7	2·5	12	9	1·0	7	

MANDLA DISTRICT.

Relief operations from December 1896 to October 1897.

Brief account of famine relief operations.

1. Famine relief operations were commenced about the middle of December 1896, and closed by the end of October 1897. There were altogether 6 relief Charges, of which 4 were in the Mandla Tahsil spaced approximately 25 miles apart, and 2 in the Dindori Tahsil. Labour was chiefly employed on raising or repairing existing roads; the only new roads constructed being the Shahpur-Shahpura and Dindori-Birsingpur Roads. In addition to these, ordinary public works were in progress on the Mandla-Seoni and the Dindori-Birsingpur Roads. The total length of road-work undertaken by famine labour was 62 miles, thus:—

New construction	...	18 miles.
Raised in class	...	29 ,,
Repaired	...	15 ,,
Total	...	62 miles

All were carried out by the Public Works Department. The average daily attendance on each Charge was 2,340, or nearly 1 out of every 24 of the population within the area served. The total number of day-units relieved from the commencement to the close of operations was over 3¾ millions, and the total expenditure incurred on all accounts over 3½ lakhs of rupees. The following table brings out the main facts in connection with the relief operations in this district:—

Particulars.	Mandla District. (6 Charges.)	Average per Charge.	Remarks.
Total area	5,056	842 sq. miles.	The whole area affected.
Affected area served	5,056	842 ,,	
Total population	339	56·5 thousands.	
Affected population served	339	56·5 ,,	
Average daily attendance	14	2·34 ,,	
Total No. of day-units relieved... ...	3·78	0·63 millions.	
	Rs.	Rs.	
Total expenditure	3·55	0·59 lakhs.	
	Cft.	Cft.	
,, Earthwork executed	49·3	8·2 ,,	
,, Metal collection	4·5	0·8 ,,	
,, *Muram* collection	10·4	1·7 ,,	
,, Consolidation	5·4	0·9 ,,	
	No.	No.	
Length of road-work	62	10·3 miles.	

Condition of relief-workers, management, &c.

2. The number of feeble persons and non-workers was large, approximately one-fifth of the total number on the relief-works. Cholera broke out more than once in most camps and the mortality was very great, the death-rate per mille during the famine being 99·8 against 30·5 average for the previous ten years for the whole district. The outlay on hutting was generally heavy, and on some works double sets of camps had to be constructed and maintained for alternate occupation during epidemics. It should be noted that the population of this district, mainly Gonds and Baigas, were entirely unused to public works of any kind and were with difficulty induced to come to work at all and still more difficult to keep there. Further, petty establishment of all kinds was practically impossible to procure in the district and was very reluctant to go there from other districts. In the first instance, moreover, the supervision was inferior. Lieut. Hawkesly, who was sent in January, was an officer

of small experience, and Supervisor Lala Hareharan Das proved of little or no use. He failed conspicuously in exercising control, and it was not until Rao Sahib Ishwari Prasad, Executive Engineer, was sent up in May that effective organization was established. Good work, however, was done by Mr. Overseer Boermel in the Dindori Sub-Division. The ratio of famine to ordinary rates of works was consequently very high (3·7 exclusive of gratuitous relief), the only work on which a fair ratio (2·4) was maintained, in spite of various difficulties, being the Shahpur-Shahpura Road under Mr. Boermel, Sub-Divisional Officer, Dindori.

System of work.

3. The works were originally all started on the task-work principle. Towards the end of May 1897 piece-work was first introduced on one Charge only, No. 6, Mandla-Seoni Road. Subsequently, at the end of June, after the Jubilee stoppage of works, it was introduced on all Charges. No. 3 Charge, Mandla-Bilaspur Road, was closed about the middle of June and re-opened about the beginning of August 1897 on the task-work system only. The Deputy Commissioner and Civil Surgeon strongly urged the abolition of piece-work altogether on the ground that over-strict classification had made the works unpopular, and that the weak and sickly would not come to them without special encouragement. Taking this and the abnormal death-rate into account, the Commissioner considered no possible remedy should be neglected, and at the end of August the task-work system was reverted to entirely in the Mandla Tahsil, and on all but one work in the Dindori Tahsil, and continued till the end of the operations. On Charge No. 7 the ratio of famine to ordinary rates of work was highest (6·10 inclusive and 5·30 exclusive of gratuitous relief against 4·20 and 3·70 average for the whole district).

Expenditure.

4. The total expenditure incurred and number of day-units relieved were Rs. 3,54,659 and 3,778,033 respectively; the percentage of total outlay being made up as follows :—

Percentage of wages, gratuitous relief and miscellaneous charges.

Wages	...	61
Gratuitous relief	...	12
Miscellaneous	...	27
		100

Expenditure per day-unit inclusive of all charges.

The expenditure per day-unit inclusive of all charges was :—

Maximum	...	...	19	pies	(10	per rupee)
Minimum	...	...	15	„	(13	„ „)
Average	...	...	18	„	(11	„ „)

Expenditure per day-unit excluding "miscellaneous" but including all other charges.

The average expenditure per day unit, exclusive of cost of special establishment, tools, hutting and other miscellaneous charges, was 13 pies against 18 pies inclusive of all charges.

Average wages earned.

The average wages earned were approximately as follows :—

Per worker	...	...	14 pies.
„ dependant	...	...	11 „

Average price of food-grains.

The prices of food-grains on which wages were calculated ranged from 6½ to 8 seers per rupee against 18 seers normal.

Work done.

The out-turn of work is exhibited in the following table :—

Particulars.	(I) Earthwork ordinary* (cft.)	(II) Metal breaking. (cft.)	Remarks.
1. Per day-unit:			*"Earthwork ordinary" includes cutting and bank in ordinary black or brown soil, lead 50 ft. lift 5 ft. equivalent to a "reduced lead" of 146 ft. by Mr. Higham's and 186 ft. by C. P. standard.
Maximum	10	0·5	
Minimum	3	0·5	
Average	6	0·5	
2. Per worker: (average)	8	0·7	
3. Per digger or male-unit: (average) ...	32	...	
4. Per carrier or female and child-unit: (average)	11	...	

Average quantity of earthwork and No. of day-units provided per mile on new roads.

From the details of work done on the Shahpur-Shahpura Road, the following results are obtained :—

Average quantity of earth-work ... 3,55,300 cft. per mile.
No. of day-units for whom work was provided on earth-work ... 61,000 No. per mile.

Heavy ghât work was done on this road, nearly 50 per cent. of the earthwork consisting of soft rock and hard *muram* with boulders.

Ratio of Famine to ordinary rates of work.

6. The ratio of famine to ordinary rates works out as follows :—

	Maximum.	Minimum.	Average.
Including gratuitous relief	6·10	2·60	4·20
Excluding do.	5·30	2·40	3·70

Permanence and utility of works.

7. The work done in the district is on the whole useful, and if funds are forthcoming to complete what has been left unfinished, will also be of a permanent character. It is feared that the outlay on metal collection on the Mandla-Bilaspur Road will give little return, as the traffic is not so considerable as to warrant its being permanently raised to class I. The Commissioner's remarks on each work carried out in the district are annexed.

Commissioner of Jubbulpore's opinion on the permanence and utility of works in the Mandla District.—(Received with Executive Engineer's No. 62/88, dated 6th January 1898.)

No.	Name of Work.	Opinion of Executive Engineer.	Opinion of Commissioner.
1	Jubbulpore-Mandla Road ...	Metal and *muram* have been collected from Tikaria to between Chiraidongri and Mandla. This will all come in useful for the ordinary repairs.	A large quantity of metal has been collected and stacked. It will gradually be used in maintenance.
2	Mandla-Seoni Road ...	A class II road is in course of construction between Mandla and Seoni. Between Mandla and Bamni *muram* has been collected and consolidated by famine labour. This should ordinarily have been done by ordinary contract.	Distinctly useful: the road is one which would have been made apart from the famine.
3	Mandla-Bilaspur Road ...	Metal and *muram* have been collected on the length of the road near Bichia. A good deal of the *muram* has been spread and consolidated and the road improved in consequence. The rest of the *muram* will be used up in future years, but the metal will probably not be required at present, as it is not likely that this road will be metalled as the traffic in this portion of it is very light.	I fear that the money spent on metal collection here will give no return. The earthwork and *muram* collection are useful: this is one of the regular district roads.
4	Mandla-Dindori Road ...	Metal and *muram* have been collected from near the Nerbudda River to Chabi. A good deal of the *muram* has been consolidated and the road improved. The metal which was broken so as to give employment to the relief-workers will probably not be used.	Here again the earthwork and *muram* collection are of use. The metal will not probably be used, as the road is a *murammed* road and carries hardly any traffic.

Commissioner of Jubbulpore's opinion on the permanence and utility of works in the Mandla District.—(Received with Executive Engineer's No. 62/88, dated 6th January 1898.)

No.	Name of Work.	Opinion of Executive Engineer.	Opinion of Commissioner.
5	Shahpura-Shahpur Road ...	A great deal of really useful work has been done towards the construction of a class II road between these two places. Some heavy *ghât* work has been well carried out by famine labour. This is a useful road and should be completed as soon as possible.	Will be very useful indeed as soon as the Amera Ghât is finished and the road completed to Shahpur. At present it stops short in the jungle. The road is an important line of communication and should be completed as soon as possible.
6	Dindori-Birsinghpur Road ...	This road is under construction as an ordinary contract work. A famine Charge was opened near Dindori and the relief-workers have collected *muram* for the whole length of 8 miles between Dindori and Shahpur. This work is therefore part of the ordinary construction of the road.	This road will bring the remote Dindori Tahsil into communication with the railway and will be of great advantage to the country. I wish that more could have been done upon it.

Abstract statement of Value

Sub-Division and name of Sub-Divisional Officer.	No. of Charge.	Name and class of work, and dates commenced and closed.	Value of work done at normal P. W. D. rates.	TOTAL EXPENDITURE AND NO. OF UNITS RELIEVED.			PERCENTAGE OF GRATUITOUS RELIEF AND SPECIAL ESTABLISHMENT, &C., OVER TOTAL EXPENDITURE.	
				Total expenditure including gratuitous relief.	Total expenditure excluding gratuitous relief.	Total number of relief workers.	Gratuitous relief.	Special establishment, tools, hutting, &c.
1	2	3	4	5	6	7	8	9
			Rs.	Rs.	Rs.	No.	Percentage.	Percentage.
Mandla. LALLA HARCHARAN DASS, Overseer, from 21st December 1896 and 27th March 1897, up to 12th January 1897 and 7th June 1897. Lieut. R. P. T. HAWKESLY, Assistant Engineer, from 13th January 1897 up to 26th March 1897. Rai Sahib ISHWARI PRASAD, Executive Engineer, from 8th June 1897.	2	Mandla-Jubbulpore, 1st Charge... **R. P. 15 miles.** From 21st December 1896 To 15th October 1897.	18,241	87,224	78,902	863,961	9	21
	3	Mandla-Bilaspur ... **R. C. 8 Miles.** From 29th December 1896 To 9th October 1897.	11,774	64,958	57,143	706,363	12	23
Mandla. LALLA HARCHARAN DASS, Overseer, from 1st April 1897 to 7th June 1897. Rai Sahib ISHWARI PRASAD, Executive Engineer, from 8th June 1897 to close of work.	4	Mandla-Dindori ... **R. C. 16 miles.** From 27th January 1897 To 21st October 1897.	12,079	53,837	45,499	663,985	16	23
	6	Mandla-Seoni ... **R. C. 5 miles.** From 1st April 1897 To 23rd October 1897.	7,111	39,380	33,032	416,990	10	23
		Total ...	49,205	2,45,399	2,14,576	2,651,299	13	23

RELIEF WORKS.

DISTRICT.

of Work done by Famine Labour.

Ratio of Famine to ordinary rates.		Work done and expenditure incurred per unit relieved.			Duration of work.	Remarks.
			Work done per unit relieved per diem.			N. R.....New road. R. C.....Raised in class. R. P.....Repairs. S. T.....Test work. P. W.....Piece-work. T. W.....Task work. N. B.—"Earthwork, ordinary" denotes earthwork in banks or cuttings or earthen sides of roads in black or brown soil; average lead and vertical lift being 50 ft. and 5 ft., respectively.
Including gratuitous relief.	Excluding gratuitous relief.	Number of units relieved per rupee.	Earthwork ordinary.	Metal breaking.		
10	11	12	13	14	15	16
Ratio.	Ratio.	No.	Cft.	Cft.	Months.	
4·7	4·3	10	6	0·4	10	**T. W.** from 21st December 1896 to 22nd June 1897. **P. W.** from 23rd June 1897 to 29th August 1897. **T. W.** from 30th August 1897 to 15th October 1897. High rates due to (1) outbreak of cholera thrice during the progress of work; camp shifted from one place to another and wages paid for no work done. (2) High price of grain (average 6½ seers) necessitating payment of high wages. (3) Large expenditure on hutting to provide two camps to be worked alternately in case of cholera breaking out during rains. About 70 to 80 per cent. of the workers were fairly healthy when **P. W.** was introduced. The effect of the system combined with **T. W.** was to encourage the robust and to secure regular daily payment to the weak.
5·5	4·9	11	...	0·4	9	**T. W.** from 29th December 1896 to 19th June 1897 and from 27th July 1897 to 9th October 1897. High rates due to closing of work in June 1897 and re-opening in July 1897 entailing extra expenditure on carriage of tools and plant and other preliminaries and to outbreak of cholera on two occasions. No. **P. W.**
4·4	3·7	13	4	0·4	9	**T. W.** from 27th January to 22nd June 1897. **P. W.** from 23rd June 1897 to 29th August. **T. W.** from 30th August 1897 to 21st October 1897. High rates due to outbreak of cholera twice entailing cessation of work during shifting of camps, and construction and maintenance of double sets of huts for alternate occupation; and to dearness of grain which was seldom more than 6½ seers per rupee. About 70 to 80 per cent. of the workers were fairly healthy when **P. W.** was introduced.
5·5	4·6	10	3	0·4	7	**T. W.** from 1st April 1897 to 30th May 1897. **P. W.** from 31st May 1897 to 29th August 1897. **T. W.** from 30th August 1897 to 23rd October 1897. High rates due to (1) Outbreak of cholera in May necessitating payment of wages for no work done. (2) A large expenditure on the construction of huts in May and June when grass could be collected with much difficulty and at high price. (3) High price of grain and consequent payment of high wages. Sixty per cent. of the workers were robust.
5·0	4·4	11	4	0·4	9	

Abstract statement of Value

Sub-Division and name of Sub-Divisional Officer.	No. of Charge.	Name and class of work, and dates commenced and closed.	Value of work done at normal P. W. D. rates.	Total expenditure and No. of units relieved.			Percentage of gratuitous relief and special establishment, &c., over total expenditure.	
				Total expenditure including gratuitous relief.	Total expenditure excluding gratuitous relief.	Total number of relief-workers.	Gratuitous relief.	Special establishment, tools, hutting, &c.
1	2	3	4	5	6	7	8	9
			Rs.	Rs.	Rs.	No.	Percentage.	Percentage.
Dindori. Mr. W. B. Boxemel, Overseer.	1	Shahpur-Shahpura ... **N. R. 10 miles.** From 16th December 1896 To 30th October 1897.	29,588	77,752	71,164	822,731	8	32
	7	Dindori-Birsingpur ... **N. R. 8 miles.** From 6th April 1897 To 24th October 1897.	5,133	31,508	27,472	304,003	13	47
		Total average ...	34,721	109,260	98,636	1,126,734	10·8	36
		Total average for District ...	83,926	354,659	315,202	3,778,033	12	27

RELIEF WORKS.

DISTRICT.

of Work done by Famine Labour.

Ratio of Famine to ordinary rates.		WORK DONE AND EXPENDITURE INCURRED PER UNIT RELIEVED.			Duration of work.	Remarks.
			Work done per unit relieved per diem.			N. R.....New road. R. C.....Raised in class. R. P.....Repairs. S. T.....Test work. P. W.....Piece-work. T. W.....Task-work. N. B.—"Earthwork, ordinary" denotes earthwork in banks or cuttings or earthen sides of roads in black or brown soil; average lead and vertical lift being 50 ft. and 5 ft., respectively.
Including gratuitous relief.	Excluding gratuitous relief.	Number of units relieved per rupee.	Earthwork ordinary.	Metal breaking.		
10	11	12	13	14	15	16
Ratio.	Ratio.	No.	Cft.	Cft.	Months.	
2·6	2·4	11	10	...	10	**T. W.** from 16th December 1896 to 22nd June 1897. **P. W.** from 23rd June 1897 to 30th October 1897. A great deal of heavy *ghat* work was done. Hutting charges were very heavy on account of the camp having to be shifted owing to outbreaks of cholera. Management very good throughout. On the introduction of piece-work, numbers fell very slightly. **P. W.** was very popular; workers objected strongly to the introduction of "modified system" (13th September) when they could only get a maximum of D wages.
6·1	5·3	10	3	...	7	**T. W.** from 6th April 1897 to 24th June 1897. **P. W.** from 25th June 1897 to 20th July 1897, **T. W.** from 21st July 1897 to 12th August 1897. **P. W.** from 13th August 1897 to 5th September 1897. **T. W.** from 6th September 1897 to 24th October 1897. The Officer-in-charge did not work satisfactorily and the people left on the work during the rains were a feeble lot and had got into lazy habits. About 70 to 80 per cent of workers fairly healthy when **P. W.** was introduced. On first introduction of **P. W.** numbers fell off at once. Piece-work was stopped from July 21st to August 12th at request of Deputy Commissioner. On re-introduction of **P. W.** on August 13th, numbers not much affected.
3·1	2·8	10	6·5	...	8	
4·2	3·7	11	6	0·5	9	

SEONI DISTRICT.

Relief operations from January 1897 to October 1897.

Brief account of Famine relief operations.

1. Famine relief operations were commenced early in January 1897 and closed by the end of October 1897. In addition to the ordinary public works on the Seoni-Mandla Road, there were in all 5 relief Charges approximately 19 miles apart. Road-work extending altogether over a length of 82 miles was undertaken by Famine labour thus :—

New construction	42	miles.
Raising in class	13	,,
Repairs	27	,,
	82	,,

The Lakhnadon-Kahani-Kedarpur Road was the only new road constructed. The Seoni-Balaghat and Keolari-Ugli Roads were improved and metal was collected for repairs to the Great Northern Road. The average daily attendance on each Charge was over 1,500, or nearly 1 out of every 26 of the affected population. The total number of day-units relieved from the commencement to the close of operations was over 1⅘ millions, and the total expenditure, including all charges, a little under 2½ lakhs of rupees. The main facts connected with the operations in this district are exhibited in the following table :—

Particulars.	Seoni District (5 Charges.)	Average per Charge.	Remarks.
Total area ...	3,198	639 sq. miles	A little over half the area was affected.
Affected area served ...	1,766	353 ,, ,,	
Total population ...	371	74 thousands	
Affected population served ...	200	40 ,,	
Average daily attendance ...	7·7	1·55 ,,	
Total No. of day-units relieved ...	1.84	0·37 millions.	
	Rs.	Rs.	
Total Expenditure ...	2·43	0·49 lakhs.	
	cft.	cft.	
,, Earthwork carried out ...	76·5	15·3 ,,	
,, Metal collection ...	11·7	2·3 ,,	
,, *Muram* ,, ...	5·3	1·1 ,,	
,, Consolidation ...	7·2	1·4 ,,	
	No.	No.	
,, Length of road-work ...	82	16·4 miles.	

Condition of relief-workers.

2. The proportion of feeble persons was considerable, approximately one to every 5 workers; and the people seeking relief were generally not accustomed to breaking of metal (hard basalt), of which the work on the Great Northern Road mainly consisted. Sickness interfered with the work more or less everywhere. There was a bad outbreak of cholera on the Keolari-Ugli Road. The death-rate during the famine was 73·8 per mille against 29·8 average of the last decennial period for the whole district.

Men and women were fined for short work, and not the children; nothing less than D wages, were, however, paid anywhere except on the Great Northern Road where, under the directions of Mr. Anderson, the Commissioner of the Jubbulpore Division, penal wages at the rate of 9 pies were paid to each man and woman during February 1897 and half of March 1897.

System and management of work.

3. The works weer all started on the task-work principle. Piece-work in conjunction therewith was introduced in May 1897, but at the request of the Commissioner stopped about the middle of September 1897, the task-system only being maintained and not interrupted again till the close of the operations. The rates of work were low, being less than double (1·8) the ordinary rates (exclusive of gratuitous relief) which is attributable to the following causes :—

1. Excellent management by the Sub-Divisional Officer, Lala Chandi Parshad.
2. Work having been done by piece for half the period.
3. Quarrying of metal and *muram* and carting having been done by contractors at ordinary rates.

Expenditure.

4. The total expenditure incurred and number of day-units relieved were Rs. 2,42,263 and 1,835,799, respectively.

Percentage of wages, gratuitous relief and miscellaneous charges.

The percentage of total outlay was made up as follows :—

Wages	...	75
Gratuitous relief		4
Miscellaneous	...	21
Total	...	100

Expenditure per day-unit inclusive of all charges.

The expenditure per day-unit inclusive of all charges was:—

Maximum	... 28 pies	(7 per rupee)
Minimum	... 22 „	(9 „ „)
Average	... 24 „	(8 „ „)

Expenditure per day-unit excluding miscellaneous but including all other charges.

The average expenditure per day-unit excluding miscellaneous but including all other charges was 19 pies against 24 inclusive of all charges.

Average wages earned.

The average wages earned were approximately as under:—

Per worker	... ...	24 pies.
„ dependant	... ...	6 „

Average price of food-grains.

The average price of food-grains was 9 seers per rupee (from 7½ to 11 seers per rupee) against 17 normal.

Work done.

5. The out-turn of work is given below:—

Particulars.	(I) Earth-work ordinary.*	(II) Metal-breaking.	Remarks.
	Cft.	Cft.	
1. Per day unit :—			* Bank or cutting in ordinary black or brown soil, lead 50 ft. and lift 5 ft. equivalent to a "reduced lead" of 146 ft. by Mr. Higham's and 186 ft. by C. P standard.
Maximum ...	30	2·1	
Minimum ...	11	1·0	
Average ...	19	1·4	
2. Per worker :—			
Average ...	23	1·7	
3. Per digger or male-unit :—			
Average ...	92	...	
4. Per carrier or female and child-unit :—			
Average ...	31	...	

Average earthwork and No. of day-units per mile on a new road.

On the Lakhnadon-Kahani-Kedarpur Road the average quantity of earthwork per mile was 180,000 cft. which provided work for 14,000 day-units in all per mile.

The ratio of famine to ordinary rates of work.

6. The ratio of famine to ordinary rates of work is as follows :—

	Maximum.	Minimum.	Average.
Including gratuitous relief ...	2·60	1·70	1·90
Excluding ,, ...	2·50	1·60	1·80

Permanence and utility of works.

7. The metal and *muram* collected on the Great Northern Road will all be gradually used up in the course of ordinary maintenance. The new Lakhnadon-Kahani-Kedarpur Road is of importance and will when completed open out a tract hitherto inaccessible to wheeled traffic. The road is being completed from Provincial Funds. The work done on the Seoni-Balaghat Road is extremely useful; the metal collected on the 2nd section of the road will be laid down next rains. On the Keolari-Ugli Road only earthwork has been done, but arrangements are in progress to put in needful road-dams and improve the *ghât* to Balaghat District.

The Commissioner's observations on these roads are herewith attached.

LIBRARY OF THE ROYAL ASIATIC

Commissioner of Jubbulpore's opinion on the permanence and utility of works in the Seoni District.—(Received with Executive Engineer's No. 62/88, dated 6th January 1898.)

No.	Name of work.	Opinion of Executive Engineer.	Opinion of Commissioner.
1	Jubbulpore-Nagpur Road—(Great Northern Road.)	Metal and *muram* have been collected between Dhuma and Lakhnadon and some of the metal has been consolidated. The remaining metal and *muram* will also be used up in the ordinary road repairs.	The metal will be gradually used in maintaining the road.
2	Lakhnadon-Kahani-Kedarpur Road ...	A good deal of construction has been done on this road, *viz.*, earthwork, *muram* collection and consolidation, &c. All the work done is of use as it is a part of the ordinary construction of the road.	A road of some importance opening out a tract now inaccessible to wheeled traffic. A good deal remains to complete it and till this is done past expenditure will show but little return.
3	Seoni-Balaghat Road ...	The first 14 miles of this road were metalled and the remaining 13 miles *murammed*. Metal has been collected for the whole length and a renewal coat of metal has been consolidated in most of the miles in the first Section of 14 miles. The road has therefore been much improved and the remaining metal will all come in useful.	The road is a very useful one. But I doubt whether the second section will ever be metalled.
4	Kahani-Keolari Road towards Lalbarra or Balaghat—(Keolari-Ugli Road).	A good deal of earthwork has been done from Keolari towards Ugli. This is all of use as part of the construction of this road.	I feel doubtful as to the utility of this road. Only earthwork has been attempted and this is incomplete.

Abstract statement of Value

Sub-Division and name of Sub-Divisional Officer.	No. of Charge.	Name and class of work, and dates commenced and closed.	Value of work done at normal P. W. D. rates.	Total expenditure and No. of units relieved.			Percentage of gratuitous relief and special establishment, &c., over total expenditure.	
				Total expenditure including gratuitous relief.	Total expenditure excluding gratuitous relief.	Total number of relief workers.	Gratuitous relief.	Special establishment, tools, hutting, &c.
1	2	3	4	5	6	7	8	9
			Rs.	Rs.	Rs.	No.	Percentage.	Percentage.
Seoni Sub-Division. LALA CHANDI PRASAD.	1	Great Northern Road ... **R. P. 13 miles.** From 11th January 1897 To 1st October 1897.	21,111	52,402	50,793	457,135	3	20
	2	Lakhnadon-Kahani-Kedarpur Road. **N. R. 31 miles.** From 11th January 1897 To 12th October 1897.	47,336	79,277	75,977	620,592	4	21
	3 & 3-A	Seopi-Balaghat Road ... **R. C. 13 miles.** **R. P. 14 miles.** From 30th January 1897 To 31st October 1897.	55,184	92,334	88,566	594,321	4	19
	6	Keolari-Ugli Road ... **N. R. 11 miles.** From 1st April 1897 To 23rd September 1897.	6,910	18,250	17,090	163,751	6	32
	4	Great Northern Road, 2nd Charge.	...	...	...	...	...	...
	5	Lakhnadon-Kahani Road, 2nd Charge.	...	...	...	...	...	...
		Total and Average ...	1,30,540	2,42,263	2,32,426	1,835,799	4	21

of Work done by Famine Labour.

Ratio of Famine to ordinary rates.		Work done and expenditure incurred per unit relieved.			Duration of work.	Remarks.
			Work done per unit relieved per diem.			N. R.....New road. R. C.....Raised in class. R. P.....Repairs. S. T.....Test work. P. W.....Piece-work. T. W.....Task work. N. B.—"Earthwork, ordinary" denotes earthwork in banks or cuttings or earthen sides of roads in black or brown soil; average lead and vertical lift being 50 ft. and 5 ft., respectively.
Including gratuitous relief.	Excluding gratuitous relief.	Number of units relieved per rupee.	Earthwork ordinary.	Metal breaking.		
10	11	12	13	14	15	16
Ratio.	Ratio.	No.	Cft.	Cft.	Months.	
2·50	2·4	9	13	1·0	9	**T. W.** from 11th January 1897 to 24th May 1897. **P. W.** 25th May 1897 to 15th September 1897. **T. W.** from 16th September 1897 to 1st October 1897. Work mainly consisted of metal breaking (hard basalt) to which most of the workers were unaccustomed. Numbers fell for the first week or so after introduction of piece-work; but then went up again. **P. W.** was stopped on account of high death rate, about middle of September 1897; **T. W.** being re-introduced.
1·7	1·6	8	21	1·7	9	**T. W.** from 11th January 1897 to 24th May 1897. **P. W.** from 25th May 1897 to 15th September 1897. **T. W.** from 16th September 1897 to 12th October 1897. This work was well managed on the whole. (For effect of Piece-work *vide* remarks on Charge No. 1.)
1·7	1·6	7	30	2·1	9	**T. W.** from 30th January 1897 to 13th May 1897. **P. W.** from 14th May 1897 to 15th September 1897. **T. W.** from 16th September 1897 to 31st October 1897. Management excellent throughout. (For effect of Piece-work *vide* remarks on Charge No. 1.)
2·6	2·5	9	11	1·0	6	**T. W.** from 1st April 1897 to 5th July 1897. **P. W** from 6th July 1897, to 15th September 1897. **T. W.** from 16th September to 23rd September 1897. An outbreak of cholera interfered with the work on this Charge. (For effect of Piece-work *vide* remarks on Charge No. 1.)
...	...	...	...	...	...	Not opened.
...	...	...	...	...	...	Not opened.
1·9	1·8	8	19	1·4	8	

SAUGOR DISTRICT.

Relief operations from December 1896 to November 1897.

Brief account of Famine relief operations.

1. Famine relief operations began early in December 1896 and were closed by the middle of November 1897; the total number of Charges was 13, and the average distance between any two Charges 17 miles. The total length of road-work undertaken by famine labour was 151 miles, thus:—

Description of work.	No. of Charges.	Length in miles.
Construction of new roads	3	24
Raising existing roads in class	7	90
Repairs to roads	3	37
Total ...	13	151

The average daily attendance on each Charge was over 2,000, or nearly 1 out of every 21 of the population within the affected area. The total number of day-units relieved from the commencement to the close of operations was nearly 6 millions, and the total expenditure, including all charges, over 6½ lakhs of rupees. Details of area affected, expenditure incurred, number relieved, &c. are given below:—

Particulars.	Saugor District. (13 Charges.)	Average per Charge.	Remarks.
Total area	4,007	308 sq. miles.	The whole area was affected.
Affected area served ...	4,007	308 „	
Total population	591	45·5 thousands.	
Affected population served ...	591	45·5 „	
Average daily attendance ...	28	2·15 „	
Total No. of day-units relieved ..	5·86	0·45 millions.	
	Rs.	Rs.	
„ Expenditure	6·56	0·51 lakhs.	
	Cft.	Cft.	
„ Earthwork executed ...	123·6	9·5 „	
„ Metal collection	19·3	1·5 „	
„ *Muram* collection	21·4	1·7 „	
„ Consolidation	6·7	0·5 „	
	No.	No.	
„ Length of road-work... ...	151	11·6 miles.	

Condition of relief workers, management, &c.

2. The condition of the relief-workers was on the whole poor. On the Saugor-Cawnpore Road (3rd Sec.) alone is the condition stated, to be "generally good"; elsewhere the proportion of weak persons was large. On the Saugor-Rahatgarh Road (Charge No. 1) nearly 50 per cent. were described as "very feeble." Sickness prevailed for nearly half the period the works were in progress, and was most marked in the Khurai Tahsil. The district being surrounded by Native States, there was a constant influx of large numbers of very emaciated and starving persons; and the death-rate of the district ran up as high as 89·0 per mille or more than double the average rate of the preceding decennial period. The greatest caution as to tasks was therefore observed, and coercive measures, such as infliction of fines for short work, &c., were most sparingly resorted to. All work was done by purely famine labour, including carriage of metal and *muram* with occasionally very long leads. Several cases of peculation were brought to light, and at an early stage of the operations some severe examples were made of Officers-in-charge, two of whom were prosecuted and sentenced to long terms of imprisonment and fine.

System of work.

3. The system throughout was principally task-work, modified by what practically amounted to gratuitous relief in food where necessary. Piece-work was tried with some success in May and June 1897 on four works, but subsequently discontinued at the request of the Deputy Commissioner, who feared that sufficient encouragement was not offered to the really needy. Later on in August 1897 it was tried again with a view to ascertain where relief was actually needed. In regard to this the Commissioner reports in August as follows:—

"But the return of people to their homes has certainly been hastened by the orders requiring that those who were distinctly robust and strong should be employed on piece-work terms, that is to say, should be paid by results. This has imposed a real work test which was lacking before, and the crowds of women and children who flocked to the works from the villages in their vicinity now do not find it worth their while to come. They were mostly in very good condition and came not in want of food, but in hope of saving a little money". The Deputy Commissioner of Saugor writes that:—"Able-bodied workers on finding that they must do a certain amount of work in order to get full wages have left the relief-works and returned to their villages. This is rather a good thing as malguzars have been complaining lately that they cannot get labour in villages."

In the remarks column of the abstracts attached, the effects of piece-work have been noted for each individual work. The results as regards the out-turn of work are not conclusive, as will be evident from the following figures:—

System of work.	No. of Charges.	Ratio of famine to ordinary rates of work exclusive of gratuitous relief.
1. Purely task-work	*12	3·3
2. Task-work and piece-work ...	7	3·2
3. Purely piece-work	1	2·3

Expenditure.

4. The total expenditure and number of day-units relieved were Rs. 6,55,556 and 5,852,990 respectively; the percentage of total outlay being made up as follows:—

Percentage of wages, gratuitous relief and miscellaneous charges.

Wages	...	69
Gratuitous relief	...	13
Miscellaneous	...	18
		100

The expenditure per day-unit, inclusive of all charges, was:—

Expenditure per day-unit including all charges.

Maximum	...	39 pies	(or 5 per rupee)
Minimum	...	15 „	(„ 13 „ „)
Average	...	22 „	(„ 9 „ „)

Expenditure per day-unit exclusive of miscellaneous charges.

The average expenditure per day-unit, exclusive of miscellaneous charges, was 18 pies against 22 pies inclusive of all charges.

The average wages earned were as follows:—

Average wages earned.

Per worker	...	18 pies
„ dependant	...	16 „

Average price of food-grains.

the average price of food-grains being 8 seers per rupee against 13 seers normal.

Works done.

5. The out-turn of work is as tabulated below:—

Particulars.	(I) Earthwork ordinary. †	(II) Metal breaking.	Remarks.
1. Per day-unit:—	Cft.	Cft.	† Cutting or bank in ordinary black or brown soil, lead 50 ft., lift 5 ft.; equivalent to a "reduced lead" of 146 ft. by Higham's and 186 ft. by C. P. Standard.
Maximum ...	25	2·0.	
Minimum ...	4	0·3	
Average ...	10	1·0	
2. Per worker: (average) ...	12	1·2	
3. Per digger or male-unit: (average)...	48	...	
4. Per carrier or female and child-unit: (average) ...	16	...	

*This includes 7 works on which piece-work was subsequently brought into force (*vide* item below.)

6. The ratio of famine to ordinary rates of work comes out as follows :—

Ratio of famine to ordinary rates of work.

	Maximum.	Minimum.	Average.
Including gratuitous relief	7·9*	2·0	3·6
Excluding do.	7·0	1·9	3·2

7. The work done in this district is on the whole useful. The Saugor-Cawnpur Road had been taken up before the famine, and the improvements effected by famine labour only anticipated action which would have been taken in the ordinary course of affairs. The Saugor-Kareli is a most useful road and money spent in anticipating up-keep charges is well laid out. The utility of the Saugor-Muhli Road, however, decreases beyond Rehli very greatly, and the Malthon-Khimlasa-Etawah Road, although it opens a short cut to the Railway to the north of the district, passes through a most depressed tract and will, the Commissioner fears, carry very little traffic.

Permanence and utility of works.

A copy of the Commissioner's opinion upon which the above general observations are based, is herewith attached.

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* On the Saugor-Jhansi Road (Charge No. 4 *a*) where work lasted for 1½ months only.

The Commissioner of Jubbulpore's opinion on the permanence and utility of works in Saugor District.—(Vide his No. 747, dated 25th January 1898 to the Executive Engineer, Saugor.)

District.	Serial No.	Name of Road.	Opinion as to utility.
Saugor ...	1	Saugor-Rahatgarh ...	On the district road scheme. A useful road.
	2	Saugor-Cawnpore ...	Taken up before the famine, and the improvements effected by famine labour only anticipated action which would have been taken in the ordinary course of affairs.
	3	Saugor Circular Road ...	I cannot say that this road is of much service to people who are not in the habit of taking evening drives. But a work near Saugor was required.
	4	Saugor-Kareli ..	A most useful road and money spent in anticipating up-keep charges has been well laid out.
	5	Saugor-Muhli ...	The section between Saugor and Rehli urgently needs improvement, and I wish that it had received a greater share of attention. Beyond Rehli the utility of the road decreases very greatly and beyond Muhli (to which it has been carried for about 5 miles) the road is of no use at all, save to serve as the first link in a road to Jubbulpore *viâ* Tendukhera. Much of the work near Muhli has merely obstructed the existing track. It is the worst famine work I have seen.
	6	Malthon-Etawah (including the Malthon-Khimlasa and Khimlasa-Etawah Roads, Charges 4, 7, and 9.)	Opens to the north of the district a short cut to the Railway, but it passes through a most depressed tract and will carry very little traffic.

Abstract statement of Value

Sub-Division and name of Sub-Divisional Officer.	No. of Charge.	Name and class of work, and dates commenced and closed.	Value of work done at normal P. W. D. rates.	Total expenditure and No. of units relieved.			Percentage of gratuitous relief and special establishment, &c., over total expenditure.	
				Total expenditure including gratuitous relief.	Total expenditure including gratuitous relief.	Total number of relief-workers.	Gratuitous relief.	Special establishment, tools, hutting, &c.
1	2	3	4	5	6	7	8	9
			Rs.	Rs.	Rs.	No.	Percentage.	Percentage.
Saugor Sub-Division. Mr. G. Neville, up to 31-5-97, Mr. Neville, from 22-1-97 to 30-6-97. Mr. Mayes, from 1-7-97 to 2-8-97. Mr. Singleton, from 3-8-97 to 23-10-97.	1	Rahatgarh-Saugor Road * ... **R. C.** From 10th December 1896 To 15th November 1897.	26,297	1,05,936	94,617	981,085	10	15
Mr. G. Neville, up to 30th June 1897. " A. R. Mayes, up to 3rd August 1897. " Singleton, up to 15th November 1897.	2	Saugor-Cawnpore Road † 2nd Section. **R. C.** From 10th December 1896 To 23rd October 1897.	20,580	90,228	80,987	666,575	10	16
	6	Saugor-Rahatgarh Road * ... **R. C.** From 22nd January 1897 To 23rd October 1897.	12,532	43,804	36,462	560,868	17	22
Mr. Neville,	10	Saugor-Rehli-Muhli Road ‡ II Charge. **R. C.** From 26th April 1897 To 3rd July 1897.	10,367	24,907	23,779	165,123	5	22
Mr. Singleton,	12	Circular Road, Saugor ... **R. P. 3 miles.** From 21st August 1897 To 30th October 1897.	1,232	3,416	3,219	38,531	6	34
		Total and averages for Saugor Sub-Division.	71,008	2,68,291	2,39,064	2,412,182	11	17
Northern Sub-Division. Mr. Neville, up to 5th March 1897. Mr. Trilokè Nath, up to 5th June 1897. Mr. Faulkner, up to end.	4	Khimlasa-Malthon Road ... **N. R. 13 miles.** From 10th December 1896 To 31st August 1897.	25,332	1,11,266	94,516	1,049,440	15	12

* Charges Nos. 1 and 6 together 16 miles.
† *Vide* Charge No. 5.
‡ *Vide* Charge No. 8.

of Work done by Famine Labour.

Ratio of Famine to ordinary rates.		Work done and expenditure incurred per unit relieved.			Duration of work.	Remarks.
Including gratuitous relief.	Excluding gratuitous relief.	Number of units relieved per rupee.	Work done per unit relieved per diem.			
			Earthwork ordinary.	Metal breaking.		
10	11	12	13	14	15	16
Ratio.	Ratio.	No.	Cft.	Cft.	Months.	
4·0	3·2	9	7	0·8	11	**T. W.** from 10th December 1896 to 16th April 1897. **P. W.** from 17th April 1897 to 23rd May 1897. **T. W.** from 23rd May 1897 to July. **P. W.** and **T. W.** combined from August to 15th November 1897. On the introduction of **P. W.** the numbers increased; there was no falling off in condition of workers. High rates due to very feeble condition of 50 per cent. of workers. Fines very sparingly inflicted. Metal mostly hard. Camps constantly shifted.
4·4	3·9	7	8	0·8	10	**T. W.** from 10th December 1896 to 24th June 1897. **P. W.** from 25th June 1897 to 9th July 1897. **T. W.** and **P. W.** from 10th July 1897 to 23rd October 1897. On introduction of **P. W.** there was never any falling off in condition of workers. The Officer-in-charge, Ali Hosain and the Sub-Overseer. Harprasad were detected in April cooking their accounts and swindling in various ways. The rates were brought down by Narayan Prasad who succeeded as Officer-in-charge. Metal mostly hard. Fines sparingly enforced
3·5	2·9	13	6	0·7	9	**T. W.** from 22nd January 1897 to 16th April 1897. **P. W.** and **T. W.** from 17th April 1897 to 29th May 1897. **T. W.** from 30th May 1897 to July. **P. W.** and **T. W.** from August to 23rd October 1897. On the introduction of **P. W.** there was never any falling off in condition of the workers. Large proportion of weak persons were on work. Coercive measures owing to prevailing sickness during the last half of the period sparingly resorted to. Metal mostly hard. Camps constantly shifted and fines sparingly enforced.
2·4	2·3	7	16	1·7	2	**T. W.** from 26th April 1897 to 3rd July 1897 throughout. On the introduction of **P. W.** the number increased rapidly. On this road work was given out on contract as an experiment. Metal mostly hard. Camps constantly shifted. Fines very sparingly enforced.
2·7	2·6	11	9	1·2	2	**T. W.** from 21st August 1897 to 30th October 1897 throughout. Gangs very sickly. Metal mostly hard. Fines very sparingly enforced.
3·7	3·4	9	9	1·0	7	
4·4	3·7	9	6	0·5	9	**T. W.** from 10th December 1896 to 31st August 1897 throughout. Metal mostly hard. The condition of the workers was very poor. Camps constantly shifted. Fines very sparingly enforced.

N. R.....New road. R. C.....Raised in class.
R. P.....Repairs. S. T.....Test work.
P. W.....Piece-work. T. W.....Task work.

N. B.—"Earthwork, ordinary" denotes earthwork in banks or cuttings or earthen sides of roads in black or brown soil; average lead and vertical lift being 50 ft. and 5 ft., respectively.

Abstract statement of Value

Sub-Division and name of Sub-Divisional Officer.	No. of Charge.	Name and class of work, and dates commenced and closed.	Value of work done at normal P. W. D. rates.	TOTAL EXPENDITURE AND NO. OF UNITS RELIEVED.			PERCENTAGE OF GRATUITOUS RELIEF AND SPECIAL ESTABLISHMENT, &C., OVER TOTAL EXPENDITURE.	
				Total expenditure including gratuitous relief.	Total expenditure excluding gratuitous relief.	Total number of relief-workers.	Gratuitous relief.	Special establishment, tools, hutting, &c.
1	2	3	4	5	6	7	8	9
			Rs.	Rs.	Rs.	No.	Percentage.	Percentage.
Northern Sub-Division. Mr. Neville, up to 5th March 1897. „ Triloke Nath, up to 5th June 1897. „ „ Faulkner, up to end.	4-A	Saugor-Jhansi Road ... **R. C. 6 miles.** From 31st May 1897 To 12th July 1897.	3,441	27,259	24,114	134,274	12	19
	7	Khimlasa-Etawah Road, Saugor District **N. R.** * From 23rd February 1897 To 31st August 1897.	13,093	37,193	32,235	443,114	13	23
	9	Khimlasa-Etawah Road ... **N. R.** * From 21st March 1897 To W. E. 30th October 1897.	11,934	57,848	49,472	688,548	14	16
		Total and averages for Nothern Sub-Division.	53,800	2,33,566	2,00,337	2,315,376	14	16
Southern Sub-Division. Mr. Neville, up to 5th March 1897. „ Triloke Nath, up to end.	3	Saugor-Kareli Road ... **R. P.** † From 14th December 1896 To 30th October 1897.	24,776	80,095	67,434	588,385	16	18
Mr. Neville, up to 31st May 1897. Mr. Mayes, up to end.	5	Saugor-Cawnpore Road, 3rd Section. **R. C.** ‡ From 2nd February 1897 To 22nd August 1897.	10,269	27,323	24,588	272,748	10	23
Mr. Neville, up to 26th June 1897. „ Triloke Nath, up to end.	8	Saugor-Rehli-Muhli Road ... **R. C.** § From 4th May 1897 To 23rd October 1897.	17,432	34,192	31,949	182,560	7	23
Mr. Mayes, up to 3rd July 1897. „ Triloke Nath, up to end.	11	Saugor-Kareli Road ... **R. P.** † From 4th July 1897 To 19th October 1897.	3,233	12,089	10,069	81,739	17	38
		Total and averages of Southern Sub-Division.	55,710	1,53,699	1,34,040	1,125,432	13	23
		Total and averages for District ...	1,80,518	6,55,556	5,73,441	5,852,990	13	18

* Charges Nos. 7 and 9 together 11 miles.
† Charges Nos. 3 and 11 together 34 miles.
‡ Charges Nos. 2 and 5 together 30 miles.
§ Charges Nos. 8 and 10 together 38 miles.

DISTRICT.

of Work done by Famine Labour.

Ratio of Famine to ordinary rates.		Work done and expenditure incurred per unit relieved.			Duration of work.	Remarks.
			Work done per unit relieved per diem.			N. R.....New road. R. C.....Raised in class. R. P.....Repairs. S. T.....Test work. P. W.....Piece-work. T. W.....Task-work. N. B.—"Earthwork, ordinary" denotes earthwork in banks or cuttings or earthen sides of roads in black or brown soil; average lead and vertical lift being 50 ft. and 5 ft., respectively.
Including gratuitous relief.	Excluding gratuitous relief	Number of units relieved per rupee.	Earthwork ordinary.	Metal breaking.		
10	11	12	13	14	15	16
Ratio.	Ratio.	No.	Cft.	Cft.	Months.	
7·9	7·0	5	...	0·7	2	**T. W.** from 31st May 1897 to 12th July 1897 throughout. Metal mostly hard. The condition of the workers was very poor and much influenced by constant influx from Native States. Camps constantly shifted. Fines very sparingly enforced.
2·8	2·4	12	7·0	2·0	6	**T. W.** from 23rd February 1897 to 31st August 1897 throughout. Metal mostly hard. Condition of the people very poor and much influenced by constant influx from Native States. Camps constantly shifted. Fines very sparingly enforced.
4·9	4·1	12	4·0	0·4	8	**T. W.** from 21st March 1897 to July. **T. W.** & **P. W.** from August to 30th October 1897, *vide* remarks, Charge No. 7.
4·3	3·7	10	6	0·9	6	
3·2	2·7	7	12	0·9	10	**T. W.** from 14th December 1896 to 30th April 1897. **P. W.** from 1st May 1897 to 3rd July. **T. W.** & **P. W.** from August to 30th October 1897. On introduction of **P. W.** there was never any falling off in the condition of workers; the numbers fell in the first week and then increased, *vide* remarks, Charge No. 7.
2·6	2·4	10	9	1·0	7	**T. W.** from 2nd February 1897 to 22nd August 1897. The condition of the labourers here was generally good throughout. Metal mostly hard. Camps constantly shifted. Fines very sparingly inflicted.
2·0	1·9	5	25	0·3	6	**T. W.** from 4th May 1897 to 3rd July. **P. W.** from 4th July to 31st July 1897. **P. W.** & **T. W.** from August to 23rd October 1897. On the introduction of the **P. W.** the numbers increased and condition of the people was fairly healthy. There was never any falling off in condition of workers; work given out on contract for two months nearly. Metal mostly hard. Camp constantly shifted. Fines very sparingly enforced.
3·6	3·1	7	12	0·8	3	**T. W.** from 4th to 31st July 1897 **T. W.** & **P. W.** from August to 19th October 1897, *vide* remarks, Charge No. 7.
2·8	2·4	7	14	0·7	7	
3·6	3·2	9	10	1·0	7	

DAMOH DISTRICT.

Relief operations from December 1896 to October 1897.

Brief account of famine relief operations.

1. Famine relief operations were commenced in December 1896 and closed in October 1897. There were altogether 10 relief Charges, spaced approximately 14 miles apart. The road-work undertaken was as follows :—

Description of work.	No of Charges.	Length of road-work.
Construction of new roads	2	5 miles.
Raising existing roads in class	6	53 „
Repairs	2	20 „
Total ...	10	78

The average daily attendance on each Charge was 2,600, or $\frac{1}{8}$th of the total distressed population altogether. The total number of day-units relieved from commencement to close of operations was over 4½ millions, the total expenditure incurred being over 4½ lakhs of rupees.

The area affected and other particulars are exhibited below :—

Particulars.	Damoh District (10 Charges.)	Average per Charge.	Remarks.
Total area ...	2,831	283 sq. miles.	Nearly two-thirds of the area was affected.
Affected area served ...	2,000	200 „	
Total population ...	325	32·5 thousands.	
Affected population served ...	200	20·0 „	
Average daily attendance ...	26	2·6 „	
Total No. of day-units relieved ...	4·65	0·47 millions.	
	Rs.	Rs.	
„ Expenditure ...	4·68	0·47 lakhs.	
	Cft.	Cft.	
„ Earth-work executed ...	79·9	8·0 „	
„ Metal collection ...	6·5	0·7 „	
„ *Muram* „ ...	6·8	0·7 „	
„ Consolidation ...	7·0	0·7 „	
	No.	No.	
„ Length of road-work ...	78·0	7·8 miles.	

Condition of relief-workers, management, &c.

2. The condition of relief-workers throughout the district was poor. Large numbers of emaciated and starving people constantly came in from the surrounding Native States, and the death-rate was very high (72·7 per mille against 38·9 per mille normal). Sickness was specially rife during the hot weather and rains up to end of July 1897, and cholera more or less frequent in most camps. All work, including carriage of metal, moorum, &c., was carried out by famine labour. Camps had constantly to be moved, as with large gangs the work in one locality was quickly exhausted. Owing to prevalence of epidemics and the enfeebled condition of the workers generally, penalties for short work were but sparingly enforced. This leniency was doubtless taken advantage of by the work-people, and may in a measure account for the high rates in this district.

System of work.

3. The task system was in force from the commencement of operations up to the end of July 1897, but at the suggestion of the Commissioner, payment by results was subsequently added for those who were specially selected as being in good condition. The effect, as reported by the Deputy Commissioner in August, was that almost all the able-bodied persons had left the work for their villages where they then found work. No comparison of results as regards the two systems is possible for this district.

Expenditure.

4. The total expenditure and number of day-units relieved were Rs. 4,68,166 and 4,644,787 respectively; the percentage of total outlay being made up as follows :—

Percentage of wages, gratuitous and miscellaneous charges.

Wages	...	61
Gratuitous relief	...	14
Miscellaneous	...	25
		100

Expenditure per day-unit inclusive of all charges.

The expenditure per day-unit inclusive of all charges was :—

Maximum	...	28 pies (or 7 per rupee)
Minimum	...	18 „ („ 11 „ „)
Average	...	19 „ („ 10 „ „)

Expenditure per day-unit exclusive of miscellaneous charges.

The average expenditure per day-unit excluding cost of tools, hutting, special establishment and other charges of a miscellaneous character, was 15 pies against 19 pies inclusive of all charges.

Average wages earned.

The average wages earned were approximately as under :—

Per worker	...	15 pies.
„ dependant	...	15 „

Average price of food-grains.

and the price of food-grains ranged from 7 to 8 seers per rupee against 16 seers normal.

Work done.

5. The out-turn of work by famine labour is exhibited in the following table :—

Particulars.	(I.) Earth-work,* ordinary.	(II.) Metal-breaking.	Remarks.
1. Per day-unit:—	Cft.	Cft.	* Cutting or bank in ordinary black or brown soil, lead 50 ft., lift 5 ft., equivalent to a "reduced lead" of 146 ft. by Mr. Higham's and 186 ft. by C. P. standard.
Maximum ...	12	3·0	
Minimum ...	3	0·3	
Average ...	6	1·0	
2. Per worker: (average) ...	8	1·2	
3. Per digger or male unit: (average).	32	.....	
4. Per carrier or female and child unit: (average) ...	11	.....	

Ratio of famine to ordinary rates of work.

6. The ratio of famine to ordinary rates works out as follows :—

		Maximum.	Minimum.	Average.
Including gratuitous relief	...	9·4	3·5	5·2
Excluding „	...	6·9	3·3	4·4

Permanence and utility of works.

7. The work done in this district is on the whole useful. The Patehra-Damoh road will be nearly parallel to the railway, but may be useful as a feeder. The Mala-Ghatera road is perhaps of doubtful utility. The work done on the Damoh-Batiagarh road is certainly useful as the road badly needed improvement. The Patharia-Garhakota road will be an important railway feeder, and the Patan-Tendukhera road a useful continuation of the Patanghât road in the Jubbulpore District. The Hatta-Gaisabad road will open out the Northern corner of the district to wheeled traffic.

A copy of the Commissioner's opinion on the above is annexed.

The Commissioner of Jubbulpore's opinion on the permanence and utility of works in the Damoh District.—(Vide his No. 747, dated 25th January 1898, to the Executive Engineer, Saugor.)

District.	Serial No.	Name of Road.	Opinion as to utility.
Damoh ...	1	Damoh-Batiagarh	Very useful indeed. Would have been improved in any case.
	2	Hatta-Gaisabad	Will open out the Northern corner of the district to wheeled traffic.
	3	Hatta-Mariadoh	Not so useful as either of the above, but connects Mariadoh with the Tahsil headquarters.
	4	Patharia-Garhakota	Very useful indeed. Will be a railway feeder from Garhakota, a rural market town of importance.
	5	Patehra-Damoh	Of little utility—this road will be superseded by railway.
	6	Damoh-Jubbulpore	A metalled road of importance and the work done at Abhana and Jabera all goes towards necessary maintenance.
	7	Abhana-Tejgarh	Tejgarh should be connected with the main road, but I fear a wrong alignment has been taken. For this the Public Works Department is not responsible.
	8	Mala-Ghatera	A Railway feeder line, but very little has been done and the length of roadway made is isolated in the jungle.
	9	Patan-Tendukhera	A useful continuation of the Patanghat Road in the Jubbulpore District.

Abstract statement of Value

Sub-Division and name of Sub-Divisional Officer.	No. of Charge.	Name and class of work, and dates commenced and closed.	Value of work done at normal P. W. D. rates.	Total expenditure and No. of units relieved.			Percentage of gratuitous relief and special establishment, &c., on the total expenditure.	
				Total expenditure including gratuitous relief.	Total expenditure excluding gratuitous relief.	Total number of relief-workers.	Gratuitous relief.	Special establishment, tools, hutting, &c.
1	2	3	4	5	6	7	8	9
			Rs.	Rs.	Rs.	No.	Percentage	Percentage.
Northern Sub-Division. Mr. C. E. Lefeuvre.	1	Hatta-Gaisabad Road ... **R. C. II. 14 miles.** From 20th December 1896 To 30th October 1897.	23,948	1,20,731	1,06,328	1,291,976	12	22
	2	Damoh-Batiagarh Road ... **R. C. II. 15 miles.** From 24th December 1896 To 25th October 1897.	21,434	88,223	77,326	963,557	12	23
	3 & 4	Jubbulpore-Damoh Road ... **R. C. I. 20 miles.** From 6th January 1897 To 25th October 1897.	16,094	76,661	65,644	701,008	14	34
	5	Hatta-Mariadoh Road ... **R. C. II. 9 miles.** From 16th April 1897 To 3rd October 1897.	9,504	66,965	57,620	672,749	14	24
	6	Patharia-Garhakota Road ... **R. C. II. 4 miles.** From 12th July 1897 To 4th October 1897.	3,833	33,765	27,907	273,190	17	22
	7	Damoh-Patera Road ... **R. C. II. 10 miles.** From 15th June 1897 To 30th October 1897.	2,694	22,199	18,556	232,309	16	23
		Total and averages for Northern Sub-Division ...	77,512	4,08,544	3,53,381	4,135,089	14	25
Southern Sub-Division. Mr. Mookerjee.	8	Mala-Ghatera Road ... **N. R. 2 miles.** From 12th July 1897 To 20th October 1897.	2,656	9,398	8,823	81,221	6	24
	9	Patan-Tendukhera Road ... **N. R. 3 miles.** From 29th June 1897 To 16th October 1897.	7,737	28,789	23,265	213,647	19	20
	10	Abhana-Tejgarh Road ... **R. C. II. 1 mile.** From 17th June 1897 To 30th October 1897.	2,273	21,435	15,638	214,830	27	29
		Total and averages for Southern Sub-Division ...	12,666	59,622	47,726	509,698	14	25
		Total and averages for Damoh District ...	90,178	4,68,66	4,01,107	4,644,787	14	25

RELIEF WORKS.

DISTRICT.

of Work done by Famine Labour.

Ratio of Famine to ordinary rates.		WORK DONE AND EXPENDITURE INCURRED PER UNIT RELIEVED.			Duration of work.	Remarks.
Including gratuitous relief.	Excluding gratuitous relief.	Number of units relieved per rupee.	Work done per unit relieved per diem.			N. R.....New road. R. C.....Raised in class. R. P.....Repairs. S. T.....Test work. P. W.....Piece-work. T. W.....Task-work. N. B.—"Earthwork, ordinary" denotes earthwork in banks or cuttings or earthen sides of roads in black or brown soil; average lead and vertical lift being 50 ft. and 5 ft., respectively.
			Earthwork ordinary.	Metal breaking.		
10	11	12	13	14	15	16
Ratio.	Ratio.	No.	Cft.	Cft.	Months.	
5·0	4·4	11	5	0·4	11	
4·1	3·6	11	12	0·5	10	
4·7	4·0	9	...	0·7	10	
7·0	6·1	10	4	...	6	
8·7	7·2	8	3	0·3	3	
8·5	6·9	10	...	0·3	4	
5·0	4·6	10	6	0·4	7	
3·5	3·3	9	9	...	3	
3·7	3·0	7	9	1·1	3½	
9·4	6·9	10	3	3·0	4½	
4·7	3·8	8	7	2·0	4	
5·2	4·4	10	6	1·0	6	

T. W. from commencement to July 1897. **P. W. & T. W.** from August to close of work. Metal broken mostly hard. The condition of the workers was very poor and much influenced by constant influx from Native States. Proportion of infirms very heavy. Camps constantly shifted. Fines most sparingly inflicted. Organization hasty and staff inadequate for influx of labour.

MAP

of the

NAGPUR CIVIL DIVISION

SHOWING

FAMINE RELIEF OPERATIONS

PUBLIC WORKS DEPT.

Scale 1 Inch = 16 Miles

NAGPUR DISTRICT.

Relief operations from December 1896 to October 1897.

1. Famine relief operations were started on the 15th December 1896, and closed on the 31st October 1897. There were in all 10 relief Charges, or 11 including a test-work, of which 5 were close to the town of Nagpur; the extent of road-work undertaken being as exhibited below :—

Brief account of famine relief operations.

		Miles.
(*a*)	Construction of new roads ...	5
(*b*)	Raising existing roads in class ...	66
(*c*)	Repairs ...	118
		189

The average daily attendance on each Charge was 1,500, or 1 out of every 15 of the distressed population within the area commanded. The total number of day-units relieved from the commencement to the close of operations was nearly two and a half millions, and the total expenditure on all accounts over 3½ lakhs of rupees. The particulars of area affected, expenditure incurred and number of persons relieved are as given below :—

Particulars.	Nagpur District. (11 Charges.)	Average per Charge.	Remarks.
Total area	3,832	348 sq. miles.	Nearly one-third of the population were distressed.
Affected area served	524	48 „	
Total population	758	69 thousands.	
Affected population served	243	22 „	
Average daily attendance	17	1·5 „	
Total No. of day-units relieved ...	2·50	0·23 millions.	
	Rs.	Rs.	
Total Expenditure	3·52	0·32 lakhs.	
	Cft.	Cft.	
„ Earthwork executed	14·2	1·3 „	
„ Metal collection	32·8	3·0 „	
„ *Muram*	5·1	0·5 „	
„ Consolidation	8·1	0·8 „	
	No.	No.	
„ Length of road-work ...	189·0	17·2 miles.	

2. The condition of relief-workers was on the whole good. There was a sharp outbreak of cholera on the Great Northern and the Kalmeshwar-Katol Roads, and a slight outbreak at Borgaon Camp. Elsewhere the progress of work was not unduly interfered with by sickness and mortality; although the district as a whole suffered considerably in this respect, the death-rate during famine being 46·4 per mille against 30·8 normal. The management too was on the whole satisfactory, which, coupled with the fact that most of the collection of metal and *muram* was carried out by contract, accounts for the very favourable rates of work throughout the district in general and the Nagpur

Condition of relief-workers, management, &c.

Sub-Division in particular. The management in the Kamptee Sub-Division under Mr. Overseer Robertson was not good, and the rates for this work out high, *viz*:—

		Ratio of famine to ordinary rates exclusive of gratuitous relief.
For	District ...	1·7
„	Nagpur Sub-Division ...	1·2
„	Kamptee „ ...	3·3

System of work.

3. The works opened before April 1897 were all started on the task-work system; subsequently piece-work was gradually introduced throughout the Nagpur Sub-Division, and by the end of May was in full force. In the Kamptee Sub-Division it was not introduced until September 1897. Both systems prevailed concurrently on most Charges from the date of introduction to the close of famine operations, but, as the Charges round Nagpur were all within easy reach of one another, four were reserved for piece-work, inefficient labour being drafted to the fifth. The rates of work on the various Charges grouped according to the system of work are as shown below :—

System of work.	No. of Charges.	Ratio of famine to ordinary rates exclusive of gratuitous relief.
Piece-work pure	4	1·2
Task-work and piece-work ...	7	1·8

Expenditure.

4. The total expenditure incurred and number of day units relieved were Rs. 3,51,886 and 2,494,247 respectively; the percentage of total outlay being made up as follows :—

Percentage of wages, gratuitous relief and miscellaneous charges.

Wages	...	84
Gratuitous relief ...	...	4
Miscellaneous ...	...	12
Total	...	100

Expenditure per day-unit inclusive of all charges.

The expenditure per day-unit inclusive of all charges was :—

Maximum ...	·96 pies (or 2 per rupee.)
Minimum ...	·22 „ („ 9 „ „)
Average ...	·27 „ („ 7 „ „)

Expenditure per day-unit excluding miscellaneous charges.

The expenditure per day-unit excluding miscellaneous charges averaged 24 pies against 27 pies inclusive of all charges as shown above.

Average wages earned.

The average wages earned were approximately as under :—

Per worker ...	...	28 pies.
„ dependant ...	...	7 „

Average price of food-grains.

The price of food-grains averaged 9 seers per rupee against 15 seers normal.

Work done.

5. The out-turn of work is given in tabular form below:—

Particulars.	(I). Earth work ordinary *	(II). Metal breaking.	Remarks.
	Cft.	Cft.	
1. Per day unit:—			* Cutting or bank in ordinary black or brown soil, lead 50 feet and lift 5 feet, equivalent to a "reduced lead" of 146 feet by Mr. Higham's and 186 feet by C. P. Standard.
Maximum	49	12	
Minimum	12	† 2·1	
Average	31	7·4	
2. Per worker: (average) ...	37	8·9	
3. Per digger or male unit: (average)..	148	...	
4. Per carrier or female and child unit: (average)... ...	50	...	

† This does not take into account Kamptee Sub-Division.

Ratio of famine to ordinary rates of work.

6. The ratio of famine to ordinary rates of work is exhibited below :—

	Maximum.	Minimum.	Average.
Including gratuitous relief ...	4·0†	1·0*	1·8
Excluding do.	3·8	1·0	1·7

Permanence and utility of works.

7. The Commissioner's opinion on the permanence and utility of works in the district as conveyed in his No. 10779, dated 18th November 1897, is as follows :—

"I consider all the works which have been carried out during the famine to be of a permanent character and distinct public utility: provided that such as remain incomplete can be completed otherwise than from the Famine Fund."

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* Nagpur Sub-Division.
† Kamptee Sub-Division.

Abstract statement of Value

Sub-Division and name of Sub-Divisional Officer.	No. of Charge.	Name and class of work, and dates commenced and closed.	Value of work done at normal P. W. D. rates.	TOTAL EXPENDITURE AND NO. OF UNITS RELIEVED.			PERCENTAGE OF GRATUITOUS RELIEF AND SPECIAL ESTABLISHMENT, &C., OVER TOTAL EXPENDITURE.	
				Total expenditure including gratuitous relief.	Total expenditure excluding gratuitous relief.	Total number of relief workers.	Gratuitous relief.	Special establishment, tools, hutting, &c.
1	2	3	4	5	6	7	8	9
			Rs.	Rs.	Rs.	No.	Percentage.	Percentage.
Nagpur Sub-Division. Mr. F. MEEHAN, Sub-Divisional Officer.	1	Station Roads and five miles of P. W. D. Roads around Nagpur. **R. P. 36 miles.** From 4th January 1897 To 2nd October 1897.	58,303	75,983	73,156	638,484	4	6
	1-A	Metal breaking and making roads at Telenkheri. **N. R. 4½ miles.** From 23th February 1897 To 30th October 1897.	19,774	23,346	23,242	110,453	0·5	8
	2	Nagpur-Umrer Road. **R. C. 29 miles.** From 4th January 1897 To 16th October 1897.	31,288	33,379	32,728	145,691	2	7
	3	Patan-Saongi-Khapa Road ... **S. T.** From 15th December 1896 To 15th March 1897.	2,813	2,354	2,354	...	...	...
	5	Umrer-Bhewanipur Road ... **R. C. 14 miles.** From 1st August 1897 To 28th September 1897.	5,036	4,949	4,949	16,800	...	..

DISTRICT.

of Work done by Famine Labour.

Ratio of Famine to ordinary rates.		Work done and expenditure incurred per unit relieved.			Duration of work.	Remarks.
Including gratuitous relief.	Excluding gratuitous relief.	Number of units relieved per rupee.	Work done per unit relieved per diem.			N. R.....New road. R. C.....Raised in class. R. P.....Repairs. S. T.....Test work. P. W.....Piece-work. T. W.....Task work. N. B.—"Earthwork, ordinary" denotes earthwork in banks or cuttings or earthen sides of roads in black or brown soil; average lead and vertical lift being 50 ft. and 5 ft., respectively.
			Earthwork ordinary.	Metal breaking.		
10	11	12	13	14	15	16
Ratio.	Ratio.	No.	Cft.	Cft.	Months.	
1·3	1·2	9	18	3·5	10	**T. W.** from 4th January 1897 to 2nd October 1897. **P. W.** from 28th May 1897 to 23rd October 1897. The collection of rubble and *muram* and carriage of metal and consolidation were carried out by contract. Metal broken nearly all hard basalt. Work done and expenditure incurred by Civil Department excluded. Condition of relief-workers fairly good on the whole. Approximate proportion of dependants to workers about 1 to 4. There was a slight outbreak of cholera at Borgaon camp in April and May. Usual reduction in class and occasional fining were all the coercive measures found necessary. On the introduction of piece-work the numbers remained stationary till camps were removed to a distance from the city when they fell rapidly.
1·2	1·2	5	41	6·3	8	**T. W.** from 28th February 1897 to 29th June 1897. **P. W.** from 3rd April 1897 to 30th October 1897. The collection of rubble and *muram* and carriage of metal and a good deal of the consolidation were done by contract. Metal broken all hard basalt. Condition of relief-workers good; approximate proportion of dependants to workers 1 to 13. There was but very little sickness. Reducing in class and a little fining were all the coercive measures found necessary. The introduction of piece-work produced no effect on the condition of the workers.
1·1	1·0	5	49	9·0	10	**T. W.** from 4th January 1897 to 5th September 1897. **P. W.** from 23rd May 1897 to 16th October 1897. The collection of 9/10ths of the rubble was done by contract and the remainder by piece-work. Metal broken hard basalt. Work done and expenditure incurred by Civil Department excluded. Condition of relief-workers both on task and piece-work was good on the whole throughout. Approximate proportion of dependants to workers about 1 to 3. There was but little sickness. No penalties or coercive measures were found necessary. The introduction of piece-work produced no effect on the condition of the workers.
0·8	0·8	...	...	...	3	**P. W.** from 15th December 1896 to 15th March 1897. This Charge was never opened for actual famine relief work and nothing was done beyond surveying and laying out and collecting rubble. Contractors used their own tools. The collection of rubble was carried out by contract.
1·0	1·0	4	...	12·3	2	**T. W.** nil. **P. W.** from 1st August 1897 to 28th September 1897. The collection of rubble was carried out by contract. Metal broken soft (quartz and sand stone). Condition of relief-workers good. There were no dependants. No sickness or shifting of camps. On account of piece-work, no penalties were necessary. This work was opened principally (1) to relieve some reported distress in this part of the country and, (2) to take some workers from the Nagpur-Umrer Road task work camp in order to hasten the closing of the latter. The introduction of piece-work produced no effect on the condition of the workers.

Abstract statement of Value

Sub-Division and name of Sub-Divisional Officer.	No. of Charge.	Name and class of work, and dates commenced and closed.	Value of work done at normal P. W. D. rates.	TOTAL EXPENDITURE AND NO. OF UNITS RELIEVED.			PERCENTAGE OF GRATUITOUS RELIEF AND SPECIAL ESTABLISHMENT, &C., OVER TOTAL EXPENDITURE.	
				Total expenditure including gratuitous relief.	Total expenditure excluding gratuitous relief.	Total number of relief-workers.	Gratuitous relief.	Special establishment, tools, hutting, &c.
1	2	3	4	5	6	7	8	9
			Rs.	Rs.	Rs.	No.	Percentage.	Percentage.
Nagpur Sub-Division. Mr. MEEHAN, Sub-Divisional Officer.	6	Kalmeshwar-Katol Road ... **R. C. 23 miles.** From 2nd April 1897 To 23rd October 1897.	16,821	31,248	30,110	294,854	4·0	14
	7	Nagpur-Kalmeshwar Road ... **R. P. 11 miles.** From 28th May 1897 To 11th September 1897.	10,375	13,587	13,387	34,321	1·5	7
	8	Great Eastern Road. ... **R. P. 21 miles.** From 25th July 1897 To 30th September 1897.	3,247	4,418	4,418	17,626	...	10
		Total and averages for Nagpur Sub-Division ...	1,47,657	1,89,269	1,84,344	1,258,229	3	8

DISTRICT.

of Work done by Famine Labour.

Ratio of Famine to ordinary rates.		Work done and expenditure incurred per unit relieved.			Duration of work.	Remarks.
Including gratuitous relief.	Excluding gratuitous relief.	Number of units relieved per rupee.	Work done per unit relieved per diem.			N. R.....New road. R. C.....Raised in class, R. P.....Repairs. S. T.....Test work. P. W.....Piece-work. T. W.....Task work. N. B.—"Earthwork, ordinary," denotes earthwork in banks or cuttings or earthen sides of roads in black or brown soil; average lead and vertical lift being 50 ft. and 5 ft., respectively.
			Earthwork ordinary.	Metal breaking.		
10	11	12	13	14	15	16
Ratio.	Ratio.	No.	Cft.	Cft.	Months.	
1·9	1·8	9	12	2·1	7	**T. W.** from 2nd April 1897 to 23rd October 1897. **P. W.** from 28th May 1897 to 23rd October 1897. The collection of about half the quantity of rubble was done by piece-work, *maram* collection and carriage of metal were done by contract. Metal broken all hard basalt. Condition of relief-workers fair. Approximate proportion of dependants to actual workers about 1 to 4. A sharp outbreak of cholera occurred in the month of June last; camp had to be shifted and work stopped (but relief continued) for 3 days. Reducing in class and occasional fining for short work were all the coercive measures adopted with regard to workers. Organization hasty but efficient. The staff was fairly adequate. The first Officer-in-charge appointed was a mere lad without experience (appointed as Naib-Tahsildar) his services were very soon dispensed with. The next man did not prove a success and left when the cholera epidemic broke out. The third man Mr. Rhea did very well. One Gang Muharrir was prosecuted for peculation, but acquitted. On the introduction of piece-work, the condition of workers improved much.
1·3	1·3	3	65	11·4	4	**T. W.** nil. **P. W.** from *28th May 1897 to 11th September* 1897. *Collection of rubble and carting of metal carried out* by contract, also consolidation. Stone broken hard basalt. Condition of relief-workers fairly good. Proportion of dependants to workers very small. There was no sickness. No penalties were necessary. Average price of grain 8¾ seers per rupee asagainst 19½ seers in ordinary years. Organization hasty but efficient. Work being by the piece no special staff was necessary. Present state of work. Metal collection and carriage to road completed with the exception of carriage of 10,000 cft. of metal still at quarry. The whole of the work done is useful. This work was started in order to take workers from Borgaon and Maroba task-work camps in order to relieve them as the numbers were increasing daily. On the introduction of piece-work the numbers remained stationary till the camps were moved to a distance from the city when they fell rapidly.
1·4	1·4	4	...	12·3	2	**T. W.** nil. **P. W.** from 25th July 1897 to 30th September 1897. Collection of rubble was carried out by contract. Stone broken partly soft and partly hard metal basalt. Condition of relief-workers good. No dependants or gratuitous relief. No penalties were necessary. Organization hasty but efficient. No special staff was necessary on account of piece-work system. This work was opened to take workers from Borgaon task-work camp in order to relieve the latter and hasten its closing. On the introduction of piece-work numbers remained stationary till the camps were removed to distance when they fell rapidly.
1·3	1·2	7	37	8·1	6	

Abstract statement of Value

Sub-Division and name of Sub-Divisional Officer.	No. of Charge.	Name and class of work, and dates commenced and closed.	Value of work done at normal P. W. D. rates.	Total expenditure and No. of units relieved.			Percentage of gratuitous relief and special establishment, &c., over total expenditure.	
				Total expenditure including gratuitous relief.	Total expenditure excluding gratuitous relief.	Total number of relief workers.	Gratuitous relief.	Special establishment, tools, hutting, &c.
1	2	3	4	5	6	7	8	9
			Rs.	Rs.	Rs.	No.	Percentage.	Percentage.
Kamptee Sub-Division. Mr. J. E. Robertson, Sub-Divisional Officer.	4	Great Northern and Ramtek branch Roads. **R. P. 26 miles.** From 4th May 1897. To 31st October 1897.	26,126	1,07,304	1,01,455	864,885	5·0	16
	4-A	Great Northern Road ... **R. P. 18½ miles.** From 4th May 1897 To 31st October 1897.	17,105	51,445	48,475	362,089	6	16
	9	North-Western Road ... **R. P. 5 miles.** From 26th September 1897 To 7th October 1897.	2,582	3,868	3,868	9,044	...	24
		Total and averages for Kamptee Sub-Division.	46,513	1,62,617	1,53,798	1,236,018	5	16
		Total and averages for Nagpur District.	1,94,170	3,51,886	3,38,142	2,494,247	4	12

DISTRICT.

of Work done by Famine Labour.

Ratio of Famine to ordinary rates.		Work done and expenditure incurred per unit relieved.			Duration of work.	Remarks.
Including gratuitous relief.	Excluding gratuitous relief.	Number of units relieved per rupee.	Work done per unit relieved per diem.			N. R.....New road. R. C .....Raised in class. R. P.....Repairs. S. T.....Test work. P. W.....Piece-work. T. W.....Task-work. N. B.—"Earthwork, ordinary" denotes earthwork in banks or cuttings or earthen sides of roads in black or brown soil; average lead and vertical lift being 50 ft. and 5 ft., respectively.
			Earthwork ordinary.	Metal breaking.		
10	11	12	13	14	15	16
Ratio.	Ratio.	No.	Cft.	Cft.	Months.	
4·0	3·8	8	1·0	1·1	6	**T. W.** from 4th May 1897 to 31st October 1897. **P. W.** from 19th September 1897 to 31st October 1897. Collection of rubble and carriage of metal and *muram* carried out by contract. Metal broken mostly hard stone. Expenditure by P. W. D. only shown. Condition of workers very good more especially towards the end of the famine. Proportion of infirms, &c. to workers about 1 in 4. There was a sharp outbreak of cholera. Camps were shifted and double camps maintained. Fining the entire gang for short work had occasionally to be resorted to and proved effective. Organization was hasty. The staff, with the exception of the Work Agent Mr. Davis, was adequate and efficient. The introduction of piece-work had no effect on the condition of the workers.
3·0	2·8	7	...	1·7	6	**T. W.** from 4th May 1897 to 31st October 1897. **P. W.** frm 26th September 1897 to 31st October 1897. Collection of rubble and carriage generally done by contract. Metal broken mostly hard gneiss. Condition of workers with few exceptions good. Proportion of infirms, &c. about 1 in 4. Very little sickness. Gangs sometime fined for short work. Organization hasty. Staff efficient and adequate with the exception of Work Agent. When piece-work was introduced the average condition of the workers was very good and continued so to the end; but the numbers fell rapidly.
1·5	1·5	2	...	14·2	1	**T. W.** from 26th September 1897 to 2nd October 1897. **P. W.** from 2nd October 1897 to 7th October 1897. Collection of rubble carried out by contract. Metal broken soft quartz. Condition of workers good. No dependants or infirms. No sickness interfered with the working of this camp. No coercive measures were necessary. Organization hasty. Staff sufficient.
3·5	3·3	8	1·0	5·7	4	
1·8	1·7	7	31	7·4	5	

WARDHA DISTRICT.

Relief operations from April 1897 to October 1897.

Brief account of famine relief operations.

1. Famine relief operations were started by opening a test work on the Wardha-Paunar road in December 1896. This was closed in January 1897. Regular relief-works were opened in April 1897, and closed in October 1897. There were nominally two Charges, *viz.*, Arvi-Ashti Road and Pulgaon-Arvi Road; but they were practically worked as one. The number of miles of road raised in class was 17, the average daily attendance being nearly 2,700, or 1 out of every 26 of the total distressed population. The total number of day-units relieved was under half a million and the total expenditure nearly $\frac{3}{4}$th of a lakh of rupees. Particulars of operations are as under :—

Particulars.	Wardha District, (1 Charge).	Remarks.
Total area	2,428 sq. miles.	Nearly one-sixth of the population were distressed.
Affected area served	650 „ „	
Total population	400 thousands.	
Affected population served	70 „	
Average daily attendance	2·7 „	
Total No. of day-units relieved ...	0·48 millions.	
	Rs.	
Total Expenditure	0·72 lakhs.	
	Cft.	
„ Earth-work executed	29·5 „	
„ Metal collection	3·0 „	
„ *Muram* „	4·5 „	
„ Consolidation	2·7 „	
	No.	
„ Length of road-work	17 miles.	

Condition of relief-workers, management, &c.

2. The condition of the relief-workers was at first bad, but improved gradually. There were no* epidemics; nor were any penalties enforced for short work. Petty peculations occurred among the Gang Muharrirs but the management was on the whole satisfactory, the rates of work being very fair. †

System of work.

3. Operations were started on the task-work system; piece-work was also added very shortly afterwards (May 1897), and both the systems were conjointly in force to the close of operations. In June 1897, the Commissioner, Nagpur Division, reported as follows :—

"Numbers have considerably fallen and this the Deputy Commissioner attributes partly to the introduction of piece-work and partly to the expected approach of the rains."

Expenditure.

4. The total expenditure incurred and number of day-units relieved were Rs. 71,832 and 474,551 respectively; the percentage of total outlay being made up as follows :—

Percentage of wages, gratuitous relief and miscellaneous charges.

Wages ...	76
Gratuitous relief ...	2
Miscellaneous ...	22
Total ...	100

Average expenditure per day-unit inclusive of all charges; and exclusive of miscellaneous charges.

The expenditure per day-unit inclusive of all charges and expenditure exclusive of miscellaneous charges, were 28 pies and 22 pies respectively; the average wages earned being:—

Average wages earned.

Per worker ...	27 pies.
„ dependant ...	5 „

* Death-rate of the district 51·9 per mille against 35·7 normal.

† Ratio of famine to ordinary=2·1 exclusive of gratuitous relief.

Average price of food-grains.

The price of food-grains averaged 9 seers per rupee against 15 seers normal.

Work done.

5. The out-turn of work by famine labour was as follows :—

Particulars.	(I) Earth-work. ordinary.*	(II) Metal-breaking.	Remarks.
1. Per day-unit : (average) ...	15	1·8	* Cutting or bank in ordinary black or brown soil, lead 50 feet and lift 5 feet, equivalent to a "reduced lead" of 146 feet by Mr. Higham's and 186 feet by C. P. standard.
2. Per worker : ,, ...	18	2·2	
3. Per digger or male unit : (average)	72	...	
4. Per carrier or female and child unit : (average)	24	...	

Ratio of famine to ordinary rates of work.

6. The ratio of famine to ordinary rates of work was as follows :—

	Maximum.	Minimum.	Average.
Including gratuitous relief	2·2	1·0	2·2
Excluding do.	2·0	1·0	2·1

Permanence and utility of works.

7. The Commissioner's opinion as regards the permanence and utility of works is* as follows :—

"I consider all the works which have been carried out during the famine to be of a permanent character and distinct public utility, provided that such as remains incomplete can be completed otherwise than from famine fund."

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* *Vide* Commissioner's letter No. 10779, dated 18th November 1897.

Abstract statement of Value

Sub-Division and name of Sub-Divisional Officer.	No. of Charge.	Name and class of work, and dates commenced and closed.	Value of work done at normal P. W. D. rates.	TOTAL EXPENDITURE AND NO. OF UNITS RELIEVED.			PERCENTAGE OF GRATUITOUS RELIEF AND SPECIAL ESTABLISHMENT, &C., OVER TOTAL EXPENDITURE.	
				Total expenditure including gratuitous relief.	Total expenditure excluding gratuitous relief.	Total number of relief workers.	Gratuitous relief.	Special establishment, tools, hutting, &c.
1	2	3	4	5	6	7	8	9
			Rs.	Rs.	Rs.	No.	Percentage.	Percentage.
Wardha Sub-Division. MR. W. J. SINGLETON, Sub-Engineer, from 4th January 1897 to 26th July 1897. " C. R. DAMODHAR, Sub-Overseer, from 29th July 1897 to 19th September 1897. " G. W. NEVILLE, Assistant Engineer, from 20th September 1897. Still in charge.	3	Arvi-Ashti Road ... **R. C. 17 miles, III-A to II.** From 24th April 1897 To 23rd October 1897.	32,407	70,716	68,968	474,551	2	22
	2	Pulgaon-Arvi Road ... **S. T.** **R. C. III-B to II.** From 1st September 1897 To 23rd October 1897.	1,130	1,116	1,116	...	...	...
	1	Wardha-Paunar Road ... **S. T.** From 19th December 1896 To 16th January 1897.	...	...	...	...	...	...
		Total and averages for Wardha District.	33,537	71,832	70,084	474,551	2	22

RELIEF WORKS.

DISTRICT.

of Work done by Famine Labour.

Ratio of Famine to ordinary rates.		Work done and expenditure incurred per unit relieved.			Duration of work.	Remarks.
Including gratuitous relief.	Excluding gratuitous relief.	Number of units relieved per rupee.	Work done per unit relieved per diem.			N. R.....New road. R. C.....Raised in class. R. P.....Repairs. S. T.....Test work. P. W.....Piece-work. T. W.....Task work. N. B.—"Earthwork, ordinary" denotes earthwork in banks or cuttings or earthen sides of roads in black or brown soil; average lead and vertical lift being 50 ft. and 5 ft., respectively.
			Earthwork ordinary.	Metal breaking.		
10	11	12	13	14	15	16
Ratio.	Ratio.	No.	Cft.	Cft.	Months.	
2·2	2·0	7	15	1·3	6	**T. W.** from 24th April 1897 to 23rd October 1897. **P. W.** from 26th May 1897 to 23rd October 1897. No expenditure by Civil Department included. People not accustomed to this sort of work. Collection of rubble and carting of metal performed by contract. Metal broken hard basalt. Condition of labourers at first bad but improved gradually. Proportion of infirms and dependants to workers about 1 in 4. No epidemics. No penalties enforced. Organization hasty but efficient. Staff adequate and fairly efficient. Petty pectulations occurred among the Gang Muharrirs. On the introduction of piece-work there was a rapid fall in numbers owing to the departure of the able-bodied.
1·0	1·0	...	...	...	...	**P. W.** from 1st September 1897 to 23rd October 1897. This charge was really always worked as part of Charge No 3. Collection of rubble done by contract. Metal broken hard basalt. Condition of workers generally good. No dependants or infirms. No sickness. No penalties were found necessary.
...	...	...	...	...	1	**S. T.** Approximate expenditure ... Rs. 520 Total No. of day-units ... No. 5,656
2·2	2·1	7	15	1·8	6	

CHANDÅ DISTRICT.

Relief operations 1896-97.

There were no actual Relief operations in this District. A few roads were surveyed and some materials were collected merely as a precautionary measure; the total expenditure incurred being Rs. 5,555.

Abstract statement of Value

Sub-Division and name of Sub-Divisional Officer.	No. of Charge.	Name and class of work, and dates commenced and closed.	Value of work done at normal P. W. D. rates.	Total expenditure and No. of units relieved.			Percentage of gratuitous relief and special establishment, &c., over total expenditure.	
				Total expenditure including gratuitous relief.	Total expenditure excluding gratuitous relief.	Total number of relief-workers.	Gratuitous relief.	Special establishment, tools, hutting, &c.
1	2	3	4	5	6	7	8	9
			Rs.	Rs.	Rs.	No.	Percentage.	Percentage.
Chanda. DAMODHAR MUDLIAR.	Unnumbered.	Chanda-Kotari Road ... **S. T.**	4,632	4,026	4,026	...	...	...
		Mul-Garchiroli Road ... **S. T.**	1,415	1,244	1,244	...	...	...
		Chimur-Warora Road ... **S. T.**	360	285	285	...	...	...
		Total ...	6,407	5,555	5,555	...	...	...

RELIEF WORKS.

DISTRICT.

of Work done by Famine Labour.

Ratio of Famine to ordinary rates.		Work done and expenditure incurred per unit relieved.			Duration of work.	Remarks.
			Work done per unit relieved per diem.			N. R.....New road. R. C.....Raised in class. R. P.....Repairs. S. T.....Test work. P. W.....Piece-work. T. W.....Task-work. N. B.—" Earthwork, ordinary " denotes earthwork in banks or cuttings or earthen sides of roads in black or brown soil ; average lead and vertical lift being 50 ft. and 5 ft., respectively.
Including gratuitous relief.	Excluding gratuitous relief	Number of units relieved per rupee.	Earthwork ordinary.	Metal breaking.		
10	11	12	13	14	15	16
Ratio.	Ratio.	No.	Cft.	Cft.	Months.	
0·9	0·9	...	...	...	...	Work was never begun on these roads. Materials were collected and surveys made as a precautionary measure.
0·9	0·9	...	...	...	...	Not opened.
0·8	0·8	...	...	...	...	
0·9	0·9	...	...	...	...	

BHANDARA DISTRICT.

Relief operations from November 1896 to November 1897.

1. It was not until September 1896 that the first feeling of uneasiness arose as to the possibility of serious scarcity in this district.* Famine-relief operations were started about the middle of November 1896 and closed in November 1897.

Brief account of famine-relief operations.

There were in all nine Charges approximately 16 miles apart. Preliminary arrangements were in readiness for three more Charges, but it was not found necessary to open them for purposes of relief.

The total length of road-work undertaken was 97 miles, thus—

		Miles.
Construction of new roads	...	38
Raising existing roads in class	...	34
Repairs (including collection of metal)	...	25
Total	...	97

The average daily attendance on each Charge was 2,600, or 1 out of every 27 of the distressed population within the area served. The total number of day-units relieved from the commencement to the close of operations was nearly 6¼ millions, and the total expenditure incurred was nearly 8½ lakhs of rupees. The main particulars connected with the relief operations are exhibited below :—

Particulars.	Bhandara District (9 Charges).	Average per Charge.	Remarks.
Total area	3,968	441 sq. miles	Very nearly the whole area was affected.
Affected area served	3,400	377 „	
Total population	742	82 thousands	
Affected population served	630	70 „	
Average daily attendance	23	2·6 „	
Total number of day-units relieved ...	6·25	0·7 millions	
	Rs.	Rs.	
„ Expenditure	8·49	0·95 lakhs	
	Cft.	Cft.	
„ Earthwork executed	111·16	12·3 „	
„ Metal collection	38·12	4·2 „	
„ *Muram* do.	44·40	4·9 „	
„ Consolidation	40·76	4·5 „	
	No.	No.	
„ Length of road-work	97·0	11·3 miles	

2. The condition † of workers was on the whole good, and the management under Mr. McQuillen was throughout excellent. There was some overcrowding in June, especially on the Tumsar-Rampaili Road; but the Charges were speedily re-adjusted and the numbers equalised. The rates were ‡ throughout extremely satisfactory.

Condition of relief-workers, management, &c.

* *Vide* Commissioner's Note, dated the 8th April 1897.

† Death-rate during famine 58·0 per mille against 29·8 (normal).

‡ Ratio of famine to ordinary rates 1·7, exclusive of gratuitous relief (average).

System of work.

3. Works were all started on the task-work system; piece-work being subsequently introduced in all the Charges.

The Commissioner's remarks on the working of the piece-work system are given below :—

JUNE 1897.

"The introduction of the piece-work system on three works (the Bhandara Circuit Road, Gondia-Balaghat Road and Satgaon Road) is no doubt responsible for part of the decrease in Bhandara; the balance must be ascribed to the approach of the monsoon, which caused cultivators and agricultural labourers to return to their homes for ploughing and sowing operations. The Deputy Commissioner reports that on relief-works their condition is almost without exception good, as nearly all of them have been at work for some months."

JULY 1897.

"The steady fall in numbers which had occurred throughout June continued during the week ending the 3rd July, but then the holding off of the rain caused large numbers to return to the relief-works, and there was a continuous increase till nearly the end of the month, when improved weather, combined with the extension of the piece-work system, had the effect of again reducing numbers. The piece-work system was introduced during the month in three camps."

AUGUST 1897.

"The large proportion of weak and emaciated labourers is attributed to their not spending anything like their day's wage or indeed even sufficient of it to keep them in health and strength."

SEPTEMBER 1897.

"The payment-by-results system has now been extended to all the relief-works of the Bhandara District. The Deputy Commissioner writes:—'Able-bodied loafers have now learnt that they must work in order even to earn a subsistence wage, and many of them accordingly departed in disgust.' The proportion of more or less weakly people on the works is thus now probably much higher than before, for a large proportion of the new comers are not able-bodied. The increase in the number of dependants is said to be due to the kitchens being now open to outsiders also."

Expenditure.

4. The total number of day-units relieved and expenditure incurred were 6,251,161 and Rs. 8,49,718 respectively; the percentage of total outlay being made up as follows :—

Percentage of wages, gratuitous relief and miscellaneous charges.

Wages	77
Gratuitous relief	9
Miscellaneous	14
Total ...	100

Expenditure per day-unit inclusive of all charges.

The expenditure per day-unit inclusive of all charges was :—

Maximum	...	...	48 pies (or 4 per rupee).
Minimum	...	...	13 „ („ 15 „).
Average	...	...	28 „ („ 7 „).

The expenditure per day-unit excluding miscellaneous charges averaged 22 pies against 28 pies inclusive of all charges as shown above.

Average wages earned.

The average wages earned were as given below :—

Per worker	...	... 24 pies.
Per dependant	...	... 18 „

Average price of food-grains.

The average price of food-grains was 9 seers per rupee against 16 seers per rupee normal.

Work done.

5. The outturn of work is shown below :—

Particulars.	(I) Earth-work, ordinary.*	(II) Metal breaking.	Remarks.
	Cft.	Cft.	
1. Per day-unit—			
Maximum ...	28	4·0	*Cutting or bank in ordinary brown or black soil, lead 50 feet, lift 5 feet, equivalent to a "reduced lead" of 146 feet by Higham's and 186 feet by Central Provinces Standard.
Minimum ...	1	0·7	
Average ...	15	2·5	
2. Per worker (average) ...	17	2·9	
3. Per digger or male-unit (average) ...	68	...	
4. Per carrier or female and child-unit (average) ...	23	...	

Ratio of famine to ordinary rates of work.

6. The ratio of famine to ordinary rates of work is shown below :—

	Maximum.	Minimum.	Average.
Including gratuitous relief	2·7	1·0	1·8
Excluding do.	2·5	1·0	1·7

The satisfactory proportion of "Wages" $\frac{77}{100}$ths as against "Miscellaneous" $\frac{14}{100}$ths and this low average ratio were in a great measure due to the careful arrangements made by Mr. McQuillen.

Permanence and utility of works.

7. The Commissioner's opinion on the permanence and utility of works in this district is as follows *:—

"I consider all the works in question to be more or less of a permanent character and of distinct public utility, provided that such as remain incomplete can now be completed otherwise than from the famine fund, and that arrangements can be made for repairing hereafter the various new roads which have been constructed."

* *Vide* Executive Engineer's No. 2154, dated 23rd November 1897.

Abstract Statement of Value

Sub-Division and name of Sub-Divisional Officer.	No. of Charge.	Name and class of work, and dates commenced and closed.	Value of work done at normal P. W. D. rates.	Total expenditure and No. of units relieved.			Percentage of Gratuitous relief and special establishment, &c., over total expenditure.	
				Total expenditure, including gratuitous relief.	Total expenditure, excluding gratuitous relief.	Total number of relief-workers.	Gratuitous relief.	Special establishment, tools, hutting, &c.
1	2	3	4	5	6	7	8	9
			Rs.	Rs.	Rs.	No.	Percentage.	Percentage.
Bhandara Sub-Division, Mr. W. J. McQuillen,	1 & 2	Metal and *muram* collection on Tumsar-Rampaili and Tumsar-Dowhali Roads. **R. C. 27 miles.** Repairs to Tumsar-Dowhali Road. **R. P. 2¼ miles.** No. 1, from 17th November 1896 To 18th October 1897. No. 2, from 3rd January 1897 To 14th November 1897.	1,71,056	2,86,984	2,62,029	1,697,738	9	13
	3	Construction of Amgaon-Lanji Road. **N. R. 2 miles.** Metal and *muram* collection on Amgaon Station Road. **R. P. 1 mile.** From 27th December 1896 To 31st October 1897.	17,403	35,928	32,804	220,640	9	13
	4 & 5	Construction of Gondia-Arjuni-Kumara Road. **N. R. 28 miles.** Repairs to Gondia-Phulchur Road. **R. P. 2¼ miles.** No. 4, from 19th November 1896 To 11th November 1897. No. 5, from 7th December 1896 To 9th October 1897.	1,13,740	2,18,680	1,99,664	1,720,859	8	13
	6	Construction of Amgaon-Satgaon Road. **N. R. 8 miles.** Repairs to Amgaon Station Road. From 9th May 1897 To 31st October 1897.	36,341	67,171	61,330	275,366	16	24

RELIEF WORKS.

DISTRICT.

of Work done by Famine Labour.

Ratio of Famine to ordinary rates.		Work done and expenditure incurred per unit relieved.			Duration of work.	Remarks.
			Work done per unit relieved per diem.			N. R...New road. R. C...Raised in class. R. P...Repairs. S. T...Test work. P. W...Piece-work. T. W...Task work.
Including gratuitous relief.	Excluding gratuitous relief.	Number of units relieved per rupee.	Earthwork, ordinary,	Metal breaking.		*N B.*—"Earthwork, ordinary" denotes earthwork in banks or cuttings or earthen sides of roads in black or brown soil; average lead and vertical lift being 50 ft. and 5 ft., respectively.
10	11	12	13	14	15	16
Ratio.	Ratio.	No.	Cft.	Cft.	Months.	
1·7	1·4	6	16	3	No. 1 11 0 No. 2 10	T. W. { No. 1, from 17th November 1896 to 18th October 1897. No. 2, from 3rd January 1897 to 14th November 1897. P. W. { No. 1, from 2nd September 1897 to 18th October 1897. No. 2, from 27th September 1897 to 14th November 1897. When piece-work was introduced, the condition of the workers was generally fair. The introduction of the system reduced the number of able-bodied workers, as they were not in need of relief. Those who had struck returned after a few days, finding that they could earn a fair wage. It produced no ill effect on the workers.
2·1	1·9	6	17	2	10	T. W. from 27th December 1896 to 31st October 1897. P. W. from 12th June 1897 to 18th September 1897. For remarks—*vide* Charges Nos. 1 and 2.
1·9	1·8	8	14	2	No. 4 12 No. 5 10	T. W. { No. 4, from 19th November 1896 to 11th November 1897. No. 5, from 7th December 1896 to 9th October 1897. P. W. { No. 4, from 28th July 1897 to 11th November 1897. No. 5, from 29th July 1897 to 9th October 1897. For remarks—*vide* Charges Nos. 1 and 2.
1·9	1·7	4	28	4	6	T. W. from 9th May 1897 to 31st October 1897. P. W. from 12th June 1897 to 31st October 1897. For remarks—*vide* Charges Nos. 1 and 2.

Abstract Statement of Value

Sub-Division and name of Sub-Divisional Officer.	No. of Charge.	Name and class of work, and dates commenced and closed.	Value of work done at normal P. W. D. rates.	Total Expenditure and No. of units relieved.			Percentage of gratuitous relief and special establishment, &c. over total expenditure.	
				Total expenditure, including gratuitous relief.	Total expenditure, excluding gratuitous relief.	Total number of relief-workers.	Gratuitous relief.	Special establishment, tools, hutting, &c.
1	2	3	4	5	6	7	8	9
			Rs.	Rs.	Rs.	No.	Percentage.	Percentage.
Bhandara Sub-Division, Mr. W. J. McQuillen.	7	Tirora-Khairlanji Road ...	5,114	6,651	6,651	...	...	44
	8	Metal and *muram* collection on Gondia-Balaghat Road, Bhandara Section, and repairs to Gondia-Balaghat Road, Bhandara Section. **R. P. 12 miles.** From 14th May 1897 To 25th October 1897.	22,601	32,915	30,053	236,782	9	13
	9	Eastern Road, Choolbund Section.	5,373	5,430	5,430	...	...	...
	10	Pauni-Bhiwapur Road ...	...	...	...	...	...	...
	11	Bhandara Camp. Metal * and *muram* collection. { Eastern Road. { Bhandara Railway Feeder Road { Bhandara Chord Line. Collection and consolidation on Bhandara Circuit Road. { Eastern Road. { Bhandara Railway Feeder Road { Bhandara Chord Line. { Bhandara Circuit Road. { Civil Buildings. **R. P. 3 miles.** **R. C. 4 miles.** From 6th May 1897 To 6th November 1897.	46,417	81,238	74,174	417,942	9	13
		Total and Averages for Bhandara Sub-Division.	4,18,044	7,34,997	6,72,135	4,569,327	9	13
Waraseoni Sub-Division, Lalla Bhagwan Dass. From 18th April 1897 to 17th August 1897. Mr. Krishnaji Vinayak. From 18th August 1897 to 16th January 1898.	4	Rampaili-Lalbarra Road ... **N. R.*** From 26th February 1897 To 6th November 1897.	42,526	1,14,721	1,04,635	1,681,834	9	17
		Total and Averages for Wara-Seoni Sub-Division.	42,526	1,14,721	1,04,635	1,681,834	9	17
		Total and Averages for Bhandara District.	4,60,570	8,49,718	7,76,770	6,251,161	9	14

* This and Charge No. 3 in Balaghat District together = 20 miles.

RELIEF WORKS.

DISTRICT.

of Work done by Famine Labour.

Ratio of Famine to ordinary rates.		Work done and expenditure incurred per unit relieved.			Duration of work.	Remarks.
Including gratuitous relief.	Excluding gratuitous relief.	Number of units relieved per rupee.	Work done per unit relieved per diem.			N. R...New road. R. C....Raised in class. R. P...Repairs. S. T ..Test work. P. W...Piece-work. T. W...Task work. *N. B.*—"Earthwork, ordinary" denotes earthwork in banks or cuttings or earthen sides of roads in black or brown soil; average lead and vertical lift being 50 ft. and 5 ft., respectively.
			Earthwork, ordinary.	Metal breaking.		
10	11	12	13	14	15	16
Ratio.	Ratio.	No.	Cft.	Cft.	Months.	
1·3	1·3	...	...	...	...	Not opened, but boulders collected in readiness and a camp and two inspection huts erected, which accounts for the high percentage of column 9.
1·5	1·3	7	...	3	5	T. W. from 14th May 1897 to 25th October 1897. P. W. from 14th June 1897 to 25th October 1897. For remarks—*vide* Charges Nos. 1 and 2.
1·0	1·0	...	...	...	...	Not opened, but boulders collected in readiness.
...	...	...	...	...	...	Not opened, but line surveyed and "dog-belled."
1·8	1·6	5	...	3	6	T. W. from 6th May 1897 to 6th November 1897. P. W. from 7th June 1897 to 6th November 1897. For remarks—*vide* Charges Nos. 1 and 2.
1·8	1·6	6	19	2·8	8	
2·7	2·5	15	0·5	0·7	8	T. W. from 26th February 1897 to 6th November 1897. P. W. from 19th September 1897 to 31st October 1897. Collection of chips for metal breaking and road dams by contract. Camp had to be shifted. Fines were inflicted for short work. Petty peculations occurred among the camp officials during charge of 1st Sub-Divisional Officer.
2·7	2·5	15	0·5	0·7	8	
1·8	1·7	7	15·1	2·5	9	

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BALAGHAT DISTRICT.

Relief operations from November 1896 to December 1897.

Brief account of famine-relief operations.

1. A few test-works on a small scale were started by the Commissioner, Nagpur Division, in the hot weather of 1896, but had to be abandoned as the people would not come on the works. It was not until October 1896 that the necessity for opening relief-works was really felt. Famine-relief operations were started early in November 1896, and the last Charge was closed on the 31st December 1897. The numbers at first were very small, especially in the Baihar Tahsil, due in some measure, according to the Commissioner's Note, dated the 5th April 1897, (1) to the wonderful way in which the uplands people subsist on forest produce; (2) to the apathy of the hill tribes; (3) to the terror they have of epidemics, and (4) to the very considerable degree of emigration, part of which he thought would probably be permanent. In April 1897 the Commissioner called attention to "a great and increasing demand" for work, especially in the eastern part of the Balaghat Tahsil, and the number of relief Charges was accordingly doubled to meet this growing demand. On some Charges the rush of people was very great; upwards of 10,000 crowding to a single work at one time. During May and June, therefore, attention was chiefly devoted to the re-adjustment of Charges so as to equalise numbers as far as practicable. The workers were strongly disinclined to being drafted from one Charge to another, and it was not until piece-work was well in force that the numbers were brought within manageable limits throughout the district generally. It will be seen from the following table that the demand for work continued practically to the very close of operations, and that fresh Charges had to be organised almost every month :—

Month.	Number of Charges opened during the month.	Remarks.
November 1896 ...	3	Maximum figures are as follows :—
February 1897 ...	1	
April „ ...	1	
May „ ...	5	Camp 5-A, 13,000 daily.
July „ ...	1	„ 9, 12,000 „
August „ ...	1	
Total ...	12	

There were ultimately 12 relief Charges approximately 12 miles apart; the work consisting mainly of construction of new roads and some few tanks :—

Particulars of work done.	Number of Charges.	Length of road-work (miles).	Number of tanks constructed.	Remarks.
New roads ...	10	95	...	Eight tanks have been completed, except masonry, and 3 left unfinished.
New tanks ...	1	...	11	
Repairs to existing roads ...	1	7	...	
Total ...	12	102	11	

The average daily attendance on each Charge was 3,500, or nearly one-ninth of the distressed population within the affected area. The total number of day-units relieved from the commencement to the close of operations was over 8¾ millions, and the total expenditure on all accounts nearly 11 lakhs of rupees. The most important particulars in connection with the relief operations are tabulated below :—

Particulars.	Balaghat District (12 Charges).	Average per Charge.	Remarks.
Total area	3,164	264 sq. miles	The whole area was affected.
Affected area served	3,164	264 „	
Total population	383	32 thousands.	
Affected population served	383	32 „	
Average daily attendance	42	3·5 „	
Total number of day-units relieved	8·78	0·73 millions.	
	Rs.	Rs.	
Total Expenditure	10·9	0·91 lakhs.	
	Cft.	Cft.	
„ Earthwork executed	254·7	21·2 „	
„ Metal collection	14·3	1·2 „	
„ Muram „	69·5	5·8 „	
„ Consolidation	36·3	2·5 „	
	No.	No.	
„ Length of road-work	102	8·5 miles.	
„ Number of tanks	11	11	All the 11 tanks were in one Charge.

Condition of relief-workers, management, &c.

2. The condition of the workers was reported by the Commissioner to be generally "healthy and strong." Cholera was frequent in the hot weather, and there was much fever during the rains. The mortality of the district as a whole was very heavy—87·8 *per mille* against 29·3, average of the preceding ten years.

In the opening of fresh and re-adjustment of old Charges great difficulty was experienced on account of the want of suitable staff. The management was, however, on the whole fair.

System of work.

3. Work was at first started on the task-work system, piece-work being subsequently added in all but three Charges.

The Deputy Commissioner, Balaghat, reported as follows in July 1897 : —"Piece-work has been introduced wherever it has been considered that the people are fit for it, that is to say where our relief-camps have been longest, and care has been taken to have task-work camps within easy reach." In September the Commissioner wrote as follows :—"During the month I inspected 5 camps in the Balaghat District with a view to deciding whether the payment-by-results system could be safely introduced on any work in that district. I discussed the question thoroughly with the Deputy Commissioner and Executive Engineer, and decided it could be introduced on most of the works in Balaghat. * * * I think it will prove distinctly beneficial in weeding out the able-bodied loafers and in making relief-workers generally realize the necessity for now seeking employment elsewhere."

The system was in full force in October 1897, and "had the effect of diminishing numbers to some extent."

The figures as regards the out-turn of work are not conclusive :—

System of work.	Number of Charges.	Ratio of Famine to ordinary rates, excluding gratuitous relief.
Task-work pure	3	1·3
Piece-work do.	1	1·14
Task-work and piece-work	8	2·6
Total and average ...	12	2·2

Expenditure.

4. The total expenditure incurred and the number of day-units relieved were as follows :—

Particulars.		Road-work.	Tank-work.	Total.
Total Expenditure	Rs.	10,55,539	34,675	10,90,214
Total number of day-units relieved ...	No.	8,215,739	555,348	8,771,087

Percentage of wages, gratuitous relief and miscellaneous charges.

The percentage of total outlay was made up thus :—

Particulars.	Road-work.	Tank-work.	For the whole district.
Wages	75	79	75
Gratuitous relief...	9	8	9
Miscellaneous	16	13	16
Total ...	100	100	100

Expenditure per day-unit.

The expenditure per day-unit was as follows :—

Particulars.	Road-work.	Tank-work.	For the whole district.
Including all charges—	Pies.	Pies.	Pies.
Maximum	96	.....	96
Minimum	15	.....	12
Average	25	12	24
Excluding Miscellaneous charges—			
Average	20	10	19

Average wages earned.

The average wages earned were approximately as given below :—

Particulars.	Road-work.	Tank-work.	For the whole district.
	Pies.	Pies.	Pies.
Per worker	22	11	22
„ dependant	13	6	13

Average price of food-grains.

The average price of food-grains was 8 seers per rupee against 16 seers normal.

Work done.

5. The following table shows the out-turn of work :—

Particulars.	Earthwork ordinary *.		Metal breaking.	Remarks.
	Road-work	Tank-work.		
	Cft.	Cft.	Cft.	
1. Per day-unit—				* Cutting or bank in ordinary brown or black soil, lead 50 ft., lift 5 ft., equivalent to a "reduced lead" of 146 ft. by Mr. Higham's, and 186 ft. by Central Provinces' standard.
Maximum	22	...	2·0	
Minimum	4	...	0·8	
Average	11	7·9	1·5	
2. Per worker (average)	13	9·6	1·8	
3. Per digger or male-unit (average) ...	52	39·0	...	
4. Per carrier or female and child-unit (average)	17	13	...	

The ratio of famine to ordinary rates of work.

6. The ratio of famine to ordinary rates of work is shown below :—

	Maximum.	Minimum.	Average.
Including gratuitous relief ...	4·4	1·19	2·4
Excluding do. ...	4·2	1·10	2·2

Permanence and utility of works.

7. The Commissioner, Nagpur Division, in his No. 10778, dated the 18th November 1897, expresses his opinion as follows*:—"I consider all the works in question to be more or less of a permanent character and of distinct public utility, provided that such as remain incomplete can now be completed otherwise than from the Famine Fund, and that arrangements can be made for repairing hereafter the various new roads which have been constructed."

* *Vide* Executive Engineer's No. 2154, dated the 23rd November 1897.

FAMINE

BALAGHAT

Abstract Statement of Value

Sub-Division and name of Sub-Divisional Officer.	Number of Charge.	Name and class of work, and dates commenced and closed.	Value of work done at normal P. W. D. rates.	Total Expenditure and No. of units relieved.			Percentage of Gratuitous relief and special Establishment, &c., over Total Expenditure.	
				Total Expenditure, including gratuitous relief.	Total Expenditure, excluding gratuitous relief.	Total number of relief-workers.	Gratuitous relief.	Special establishment, tools, hutting, &c.
1	2	3	4	5	6	7	8	9
			Rs.	Rs.	Rs.	No.	Percentage.	Percentage.
Balaghat Sub-Division. Lalla Bhagwandass. From 18th April 1897 to 16th October 1897. Mr. Madho Rao. From 17th October 1897 to 11th December 1897.	5	Amgaon-Lanji Road ... **N. R.*** From 10th November 1896. To 21st October 1897.	50,632	1,56,098	1,44,009	1,286,334	8	13
	5-A	Amgaon-Lanji Road ... **N. R. *** From 4th April 1897. To 17th November 1897.	40,278	1,33,211	1,13,545	960,834	15	13
	10	Lanji-Balaghat Road ... **N. R.†** From 21st May 1897. To 13th November 1897.	36,759	85,404	81,124	1,076,096	5	13
	9	Lanji-Balaghat Road. **N. R. †** From 10th May 1897. To 6th December 1897.	23,839	1,04,320	99,452	1,185,527	5	22
	11	Gondia-Balaghat Road ... **R. P. 7 miles.** From 19th July 1897. To 3rd November 1897.	16,540	39,537	37,315	200,970	6	21
		Total and Averages for Balaghat Sub-Division.	1,68,048	5,18,570	4,75,445	4,709,761	8	15

* 5 and 5-A together 16 miles.

† 10 and 9 together 20 „

RELIEF WORKS.

DISTRICT.

of Work done by Famine Labour.

Ratio of Famine to ordinary rates.		Work done and Expenditure incurred per unit relieved.			Duration of work.	Remarks.
Including gratuitous relief.	Excluding gratuitous relief.	Number of units relieved per rupee.	*Work done per unit relieved per diem.* Earthwork, ordinary.	Metal breaking.		N. R.....New road. R. C.....Raised in class. R. P.....Repairs. S. T.....Test-work. P. W.....Piece-work. T. W.....Task-work. N. B.—"Earthwork, ordinary" denotes earthwork in banks or cuttings or earthern sides of roads in black or brown soil; average lead and vertical lift being 50 ft. and 5 ft. respectively.
10	11	12	13	14	15	16
Ratio.	Ratio.	No.	Cft.	Cft.	Months.	
3·0	2·8	8	8	1·1	11¼	**T. W.** from 10th November 1896 to 21st October 1897. **P. W.** from 26th July 1897 to 21st October 1897. All work done by relief-workers except collection of chips for *gitti* breaking, hutting and masonry in wells and mile stones, which were done by contract. The camp was overcrowded and the staff inefficient. Metal broken exceptionally hard. When piece-work was introduced, the condition of the people was good, 70 per cent. of the workers being able-bodied. The robust idlers left the work, and the numbers then remained steady. When "payment-by-results" was enforced, the numbers went down again to some extent.
3·3	2·8	7	9	1·1	7½	**T. W.** from 4th April 1897 to 17th November 1897. **P. W.** from 26th July 1897 to 17th November 1897. All work done by relief-workers except collection of chips for metal-breaking, masonry in wells and mile stones which were done by contract. Large numbers flocked to this work; maximum 13,000. Carriage of metal and *muram* from quarries to roadside (3 to 5 miles) in the rainy season was very difficult and costly. For remarks on piece-work, *vide* Charge No. 5.
2·3	2·2	13	7	0·9	5¾	**T. W.** from 21st May 1897 to 13th November 1897. **P. W.** from 7th October 1897 to 31st October 1897. For remarks on piece-work, *vide* Charge No. 5.
4·4	4·2	11	4·0	0·8	7	**T. W.** from 10th May 1897 to 6th December 1897. **P. W.** (payment-by-results) from 7th October 1897 to 6th December 1897. For remarks on piece-work, *vide* Charge No. 5.
2·4	2·3	5	22	2	3½	**T. W.** from 19th July 1897 to 3rd November 1897. **P. W.** from 28th July 1897 to 3rd November 1897. The relief-workers here were extremely weak, the worst in the Division; towards the end of the famine season about 80 per cent. were weak and infirm. For remarks on piece-work, *vide* Charge No. 5.
3·0	2·8	9	10	1·1	7	

Abstract Statement of Value

Sub-Division and name of Sub-Divisional Officer.	Number of Charge.	Name and class of work, and dates commenced and closed.	Value of work done at normal P. W. D. rates.	Total Expenditure and No. of units relieved.			Percentage of Gratuitous relief and special Establishment, &c., over Total Expenditure.	
				Total Expenditure, including gratuitous relief.	Total Expenditure, excluding gratuitous relief.	Total number of relief-workers.	Gratuitous relief.	Special establishment, tools, hutting &c.
1	2	3	4	5	6	7	8	9
			Rs.	Rs.	Rs.	No.	Percentage.	Percentage.
Wara-Seoni Sub-Division. Mr. Hayden. From 12th December 1896 to 17th April 1897. Lala Bhagwandass. From 18th April 1897 to 17th August 1897. Mr. Krishnaji Vinayak. From 18th August 1897 to 16th January 1898.	3	Rampaili-Lalbarra Road ... **N. R. 12 miles.** From 16th November 1896. To 30th October 1897.	70,197	1,96,297	1,71,143	1,256,885	13	
Lala Bhagwandass. From 18th April 1897 to 17th August 1897. Mr. Krishnaji Vinayak. From 18th August 1897 to 16th January 1898.	7	Wara-Seoni-Katangi Road ... **N. R. 19 miles.** From 6th May 1897. To 23rd December 1897.	52,285	83,999	78,633	968,695	6	14
		Total and Averages for Wara-Seoni Sub-Division in Balaghat District.	1,22,482	2,80,296	2,49,776	2,225,580	11	13

Vide Charge No. 2.

DISTRICT.

of Work done by Famine Labour.

Ratio of Famine to ordinary Rates.		Work done and Expenditure incurred per unit relieved.			Duration of work.	Remarks.
Including gratuitous relief.	Excluding gratuitous relief.	Number of units relieved per rupee.	*Work done per unit relieved per diem.* Earthwork, ordinary.	*Work done per unit relieved per diem.* Metal breaking.		N. R.....New road. R. C.....Raised in class. R. P.....Repairs. S. T.....Test-work. P. W . ...Piece-work. T. W.....Task-work. N. B.—"Earthwork, ordinary" denotes earthwork in banks or cuttings or earthen sides of roads in black or brown soil; average lead and vertical lift being 50 ft. and 5 ft., respectively.
10	11	12	13	14	15	16
Ratio.	Ratio.	No.	Cft.	Cft.	Months.	
2·8	2·4	6	12	2·0	11½	T. W. from 16th November 1896 to 30th October 1897. P. W. from 1st August 1897 to 30th October 1897, *vide* remarks, Charge No. 5-*a*. For remarks on piece-work, *vide* Charge No. 5.
1·6	1·5	12	12	2	7½	T. W. from 6th May 1897 to 23rd December 1897. P. W. from 1st August 1897 to 23rd December 1897. For remarks on piece-work, *vide* Charge No. 5.
2·3	2·0	8	12	2·0	10	

BALAGHAT

Abstract Statement of Value

Sub-Division and name of Sub-Divisional Officer.	Number of Charge.	Name and class of work, and dates commenced and closed.	Value of work done at normal P. W. D. rates.	Total Expenditure and No. of units relieved.			Percentage of Gratuitous relief and special Establishment, &c., over Total Expenditure.	
				Total Expenditure, including gratuitous relief.	Total Expenditure, excluding gratuitous relief.	Total number of relief-workers.	Gratuitous relief.	Special establishment, tools, hutting, &c.
1	2	3	4	5	6	7	8	9
			Rs.	Rs.	Rs.	No.	Percentage.	Percentage.
Pipartola Sub-Division. Mr. Bhicaji Bhasker. From 11th December 1897 to 25th December 1897. Mr. Hashman. From 8th May 1897 to 5th October 1897. Lala Bhagwandass. From 18th April 1897 to 7th May 1897, 18th October 1897 to 10th December 1897. Mr. A. Hanmanth Rao. From 6th October 1897 to 17th October 1897.	1	Balaghat-Baihar Road ... **N. R.* 3rd Section.** From 25th November 1896. To 25th December 1897.	50,046	75,262	68,857	717,094	9	24
	12	Balaghat-Baihar Road ... **N. R.* 2nd Section.** From 14th May 1897. To 31st December 1897.	62,750	74,926	71,926	91,084	4	12
Mr. Hashman. From 8th May 1897 to 5th October 1897. Lalla Bhagwandass From 6th October 1897 to 27th November 1897.	2	Balaghat-Baihar Road, 1st Section. **N. R.*** From 28th May 1897. To 27th November 1897.	21,591	1,04,185	92,094	452,774	11	18

* Charges Nos. 1, 12 and 2 together 25 miles.

RELIEF WORKS.

DISTRICT.

of Work done by Famine Labour.

Ratio of Famine to ordinary rates.		Work done and Expenditure incurred per unit relieved.			Duration of work.	Remarks.
Including gratuitous relief.	Excluding gratuitous relief.	Number of units relieved per rupee.	*Work done per unit relieved per diem.*			N. R.....New road. R. C.....Raised in class. R. P.....Repairs. S. T.....Test-work. P. W.....Piece-work. T. W.....Task-work. N. B.—"Earthwork, ordinary" denotes earthwork in banks or cuttings or earthern sides of roads in black or brown soil; average lead and vertical lift being 50 ft. and 5 ft., respectively.
			Earhwork, ordinary.	Metal breaking.		
10	11	12	13	14	15	16
Ratio.	Ratio.	No.	Cft.	Cft.	Months.	
1·5	1·4	9	12	2	12	T. W. from 25th November 1896 to 25th December 1897.
1·19	1·14	1·2	...	...	7½	P. W. from 14th May 1897 to 31st December 1897. Work carried out by special arrangement by piece-work under contractor, being all *ghât* work. Workers mainly strong and hardy.
4·71	4·26	4	10·1	1·8	6	T. W. from 28th May 1897 to 27th November 1897. P. W. from 27th September 1897 to 27th November 1897. All work done by relief-workers except collection of chips for metal-breaking and hutting by contract. For remarks on piece-work, *vide* Charge No. 5.

BALAGHAT

Abstract Statement of Value

Sub-Division and name of Sub-Divisional Officer.	Number of Charge.	Name and class of work, and dates commenced and closed.	Value of work done at normal P. W. D. rates.	Total Expenditure and No. of units relieved.			Percentage of Gratuitous relief and special Establishment, &c., over Total Expenditure.	
				Total Expenditure, including gratuitous relief.	Total Expenditure, excluding gratuitous relief.	Total number of relief-workers.	Gratuitous relief.	Special establishment, tools, hutting, &c.
1	2	3	4	5	6	7	8	9
			Rs.	Rs.	Rs.	No.	Percentage.	Percentage.
Pipartola Sub-Division.—(Concld.)								
Mr. Bhicaji Bhaskar. From 21st February 1897 to 5th July 1897. Mr. A. K. Chatterji. From 6th July 1897 to 24th July 1897.	6.	Tanks in Baihar Tahsil ...	28,831	34,675	31,818	555,348	8	
		New Tanks.						
		From 21st February 1897.						
		To 24th July 1897.						
Mr. Hashman. From 1st August 1897 to 5th October 1897. Lalla Bhagwandass. From 18th October 1897 to 10th December 1897. Mr. Hanmanth Rao. From 6th October 1897 to 17th October 1897.	14	Lamtha-Baihar Road ...	1,631	2,300	2,244	19,446	2	18
		N. R. 2 miles.						
		From 1st August 1897.						
		To 23rd October 1897.						
		Total and Averages for Pipertola Sub-Division.	1,64,849	2,91,348	2,66,939	1,835,746	8	18
		Grand Total Balaghat District.	4,55,379	10,90,214	9,92,160	8,771,087	9	16

RELIEF WORKS.

DISTRICT.

of Work done by Famine Labour.

Ratio of Famine to ordinary rates.		Work done and Expenditure incurred per unit relieved.			Duration of work.	REMARKS.
			Work done per unit relieved per diem.			N. R.....New road. R. C .... Raised in class. R. P.....Repairs. S. T.....Test-work. P. W.....Piece-work. T. W.... Task-work. N. B.—"Earthwork, ordinary" denotes earthwork in banks or cuttings or earthern sides of roads in black or brown soil; average lead and vertical lift being 50 ft. and 5 ft., respectively.
Including gratuitous relief.	Excluding gratuitous relief.	Number of units relieved per rupee.	Earthwork ordinary.	Metal breaking.		
10	11	12	13	14	15	16
Ratio.	Ratio.	No.	Cft.	Cft.	Months.	
1·20	1·10	16	7·9	...	5	T. W. from 21st February 1897 to 24th July 1897. Eleven tanks were constructed, *viz.*—Bakal, Bakhari-Kona, Bhilewani, Ajgara, Taregaon, Alna, Goradehi, Kowlewara, Jhalewara, Nawargaon, Muljhar. Of these, eight have been completed except masonry, and three left unfinished.
1·41	1·37	8	13·5	...	2½	T. W. from 1st August 1897 to 23rd October 1897.
1·8	1·6	6	11	1·9	7	
2·4	2·2	8	11	1·5	7	

SECRETARIAT PRESS, NAGPUR :—R. D., 28-3-98—600.

MAP

of the

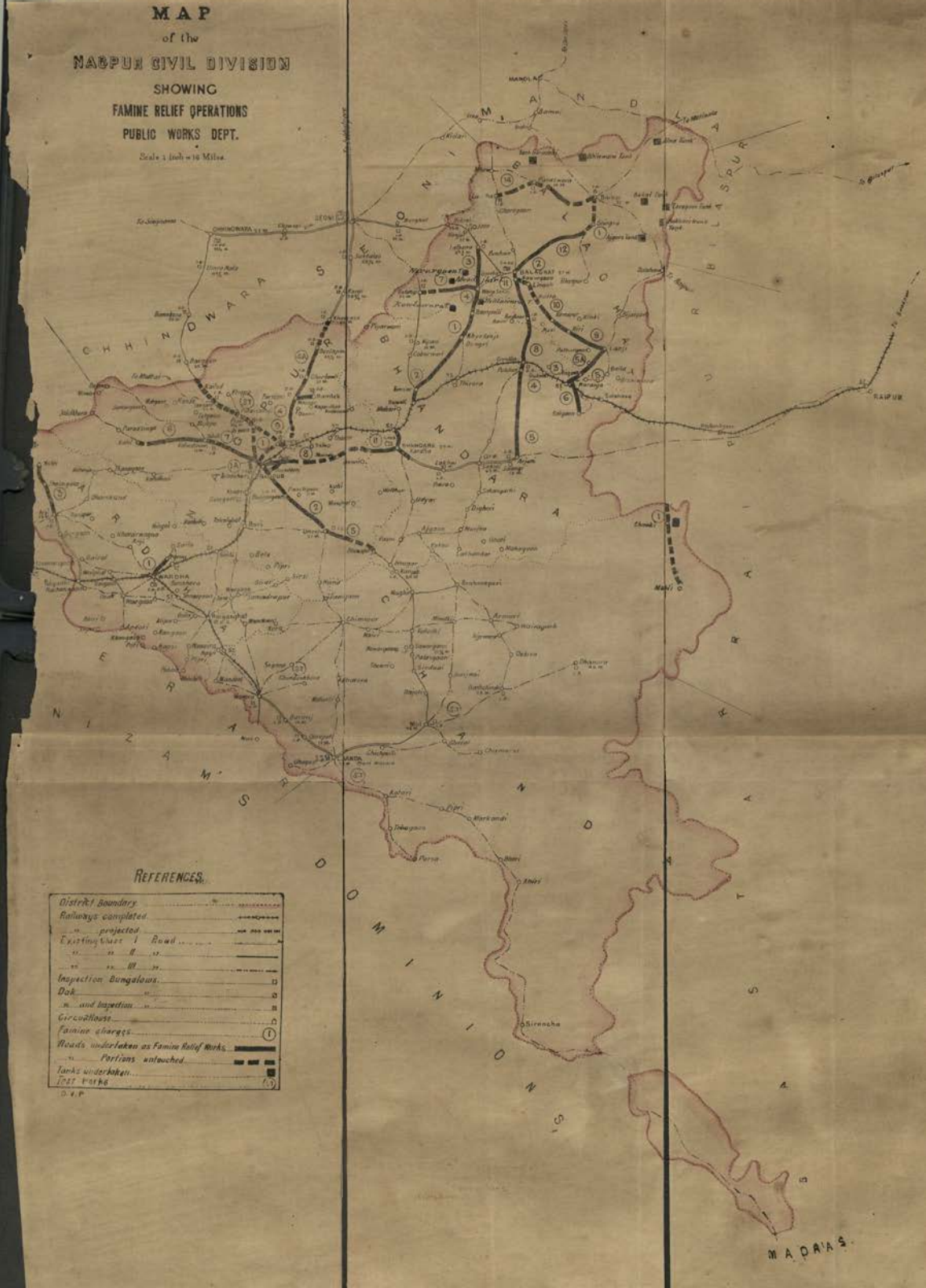
NAGPUR CIVIL DIVISION

SHOWING

FAMINE RELIEF OPERATIONS

PUBLIC WORKS DEPT.

Scale 1 Inch = 16 Miles.



REFERENCES.

- District Boundary
- Railways completed
- " projected
- Existing Class I Road
- " " II "
- " " III "
- Inspection Bungalows
- Dak "
- " and Inspection "
- Circuithouse
- Famine charges
- Roads undertaken as Famine Relief Works
- " Portions untouched
- Tanks undertaken
- Test Pits

D.W.P.

HOSHANGABAD DISTRICT.

Relief operations from December 1896 to October 1897.

Brief account of famine relief operations.

1. Famine relief operations were started early in December 1896 and closed by the end of October 1897. There were in all 19 relief Charges, approximately 16 miles apart; the road-work undertaken being as follows :—

Particulars.	Number of Charges.	Length in miles.	Remarks.
New roads	4	41	
Raised in class	9	97	
Repaired	6	68	
Total ...	19	206	

The average daily attendance on each Charge was over 2,600, or nearly 1 out of every 7 of the distressed population within the area served. In May 1897, the numbers were highest and the average attendance was one out of every 6 of the affected population. The total number of day-units relieved from the commencement to the close of operations was over 10½ millions, and the total expenditure nearly 14 lakhs of rupees. The most important particulars of relief operations are given below :—

Particulars.	Hoshangabad district (19 Charges.)	Average per Charge.	Remarks.
Total area	4,024	212 sq. miles.	A little less than the whole area was affected.
Affected area served ...	3,794	200 „	
Total population	499	26·3 thousands.	
Affected population served ...	361	19·0 „	
Average daily attendance ...	50	2·6 „	
Total number of day-units relieved ...	10·54	0·55 millions.	
	Rs.	Rs.	
„ Expenditure ...	13·95	0·73 lakhs.	
	Cft.	Cft.	
„ Earthwork done ...	288·90	15·2 „	
„ Metal collection ...	24·00	1·3 „	
„ *Murum* „	13·67	0·72 „	
„ Consolidation	6·20	0·33 „	
	No.	No.	
„ Length of road-work ...	206·00	10·8 miles.	

Condition of relief workers, management, &c.

2. The condition of the people was on the whole fair. Certain of the workers in the hill tracts were, however, of poor physique. Fines for contumacy were but sparingly inflicted, and a long rest had to be given at mid-day during the hot weather to protect the workers from the effects of heat. Occasionally, the numbers of non-workers rose as high as 30 per cent., due to the influx of children from the neighbouring villages. People, as a rule, flocked to the works in large numbers and the congestion at places was so great that additional Charges had to be hastily opened. On the Semri-Sohagpur road, for example, the numbers rose to 12,000 in May 1897, and a fresh Charge was consequently opened on the Sobhapur-Bhatgaon road. Great difficulty was experienced and heavy expenditure incurred in providing an adequate water-supply for such crowds of workers; in one instance, (Charge No. 4) water had to be carried by rail for several miles from the Railway Station. Cholera raged in most Camps * and retarded the work in various ways. The workers could not be spread out along the roads to work at the new embankments for fear of infecting the villages near and had to be kept in camps on less useful work. Camps had to be shifted and double sets to be maintained for alternate occupation. Organisation was necessarily hasty during epidemics, and some works suffered from the incompetence of

* Death-rate per mille during famine 69·0 against 36·3 average of preceding decennial period.

officers-in-charge. With the exception of a small quantity of metal collection and consolidation, all works were carried out purely by famine labour. In January 1897, the Commissioner, Nerbudda Division, called attention to the fact that the able-bodied workers were cheerfully doing as much as 100 cft. per man against a maximum task of 90 cft., and "in view of the apparent disposition of the cultivators to take to our works as a means of laying by a small store of cash for future needs," recommended that where the tasks performed exceeded the P. W. D. scale they should not be reduced.

System of work.

3. All works were started on the task-work system except the first section of Sobhapur-Bhatgaon road, which was commenced in June 1897 on the piece-work system. Piece-work was gradually added between May and August 1897, and continued to the end of the operations on all but 5 Charges, where the task system alone remained in force. There was a large decrease in the number of workers in June shortly after its introduction, ascribed by the Commissioner, Nerbudda Division, to the following causes:—

(*a*) the spontaneous withdrawal from the works of cultivators, who went off to sow their fields;

(*b*) the measures taken in accordance with the decision of the Pachmarhi Conference held on the 25th May, to temporarily close certain works by the 20th June, in order to prevent competition between Government works and the agricultural labour market; and

(*c*) The introduction of piece-work on most works. *

In his report for August 1897 the Commissioner expresses the following opinion on the piece-work system:—

"Piece-work was in force (side by side with task-work) on the relief-works in the Nerbudda Valley districts, with one or two exceptions. * * My conclusion was that piece-work, when managed departmentally, is a useful check on the resort to relief-works by persons not absolutely starving and able to earn a subsistence elsewhere * * Towards the close of the month the revised system prescribed by the Chief Commissioner, whereby contractors are excluded and piece-workers cannot earn more than the D. wage, was being introduced. * * With regard to these new rules, the Deputy Commissioner reported as follows in September 1897:—

"The new rules for piece-work are no doubt unpopular and have, in some cases, led to large numbers of able-bodied idlers leaving the works. This was specially the case on the Piparia-Sobhapur branch of the Hatwas work, where 600 piece-workers left on the first pay-day; but my enquiries shew that the majority, if not the whole of these, were persons who did not really require support and could easily manage for themselves."

No reliable conclusion can be arrived at as to the influence of piece-work on the out-turn of work, owing to the desertion of works by the able-bodied which, in reality, tended to increase the rates on account of the remaining workers being mostly feeble and unaccustomed to P. W. D. road-work:—

System of work.	Number of Charges.	Ratio of famine to ordinary rates of work exclusive of gratuitous relief.	Remarks.
Task-work ...	5	*2·1	* Maximum 3·1
Piece-work ...	1	1·6	
Task-work and piece-work ...	13	3·2	
Total ...	19	2·9	

Expenditure.

4. The total expenditure incurred and number of day-units relieved were Rs. 13,94,455 and 10,542,306, respectively; the percentage of total outlay being made up as follows:—

Percentage of wages, gratuitous relief and miscellaneous charges.

Wages ...	... 62
Gratuitous relief ...	... 8
Miscellaneous ...	... 30
	100

*Commissioner's No. 765-C., dated 10th July 1897.

Expenditure per day-unit inclusive of all charges.

The expenditure per day-unit inclusive of all charges was :—

Maximum	...	48 pies (or 4 per rupee)
Minimum	...	18 „ („ 11 „)
Average	...	24 „ („ 8 „)

Average expenditure excluding miscellaneous but including wages and gratuitous relief.

The average expenditure per day-unit excluding cost of special establishment, hutting, conservancy, tools and other miscellaneous charges, was 18 pies against 24 pies including all charges.

Average wages earned.

The average wages earned were approximately as follows :—

Per worker ...	...	18 pies.
„ dependant	...	10 „

The price of food-grains ranged from 6 to 9 seers per rupee, averaging 8 seers per rupee against 14 seers normal.

Work done.

5. The out-turn of work for the two principal items is given below :—

Particulars.	(I) Earth-work ordinary.*	(II) Metal-breaking.	Remarks.
	Cft.	Cft.	
1. Per day-unit :—			*Cutting or bank in ordinary black or brown soil; lead 50 ft., lift 5 ft., equivalent to a "reduced lead" of 146 ft. by Mr. Higham's and 186 ft. by C. P. standard.
Maximum ...	32	3·0	
Minimum ...	5	0·6	
Average ...	14	1·3	
2. Per worker ...	16	1·5	
3. Per digger or male unit: average ...	64	...	
4. Per carrier or female and child unit : average ...	21	...	

Quantity of earthwork and number of day-units per mile on new roads.

The quantity of earth-work per mile on new roads, and the number of day-units for whom it provided work per mile, are exhibited below :—

Name of road.	Length of actual construction.*	Quantity of earth-work per mile.	Number of day-units per mile.	Remarks.
	Miles.	Cft.		
Babai-Bagra	21	206,000	30,689	*Partly new roads and partly raised in class.
Semri-Barkatch	21	231,300	50,240	† Nearly 5 per cent. of the total quantity of earth-work in Charge No. 10 was soft rock-cutting.
Sodalpur-Dekhna † ...	18½	177,562	34,888	

Ratio of famine to ordinary rates of work.

6. The ratio of famine to ordinary rates comes out as follows :—

	Maximum.	Minimum.	Average.
Including gratuitous relief ...	6·5	1·3	3·2
Excluding do. ...	6·2	1·3	2·9

Permanence and utility of works.

7. The works carried out are all useful and of a permanent character. All roads with the exception of those on the Pachmarhi Plateau are valuable trade routes, the improvement of which, the Commissioner says, "is of a real and lasting benefit to the public." Those constructed and improved by famine labour on the Plateau are of use to the Civil and Military residents, the one towards Rorighat alone being used by the general public. The Commissioner's opinion is herewith attached.

Commissioner of Nerbudda Division's opinion on the permanence and utility of works undertaken in the Hoshangabad District.—
(Received with Executive Engineer's No. 7645, dated 27th November 1897.)

No.	Name of work.	Opinion of Executive Engineer.	Opinion of Commissioner.
1	Piparia-Sandia Road ...	A very important Railway feeder road after the Harda-Handia road, perhaps the most important in the District. The work done all of a permanent character and of public utility.	It is unnecessary for me to enter remarks against each road in the subjoined list, as I should simply have to say the same thing over again. What I have to observe regarding the famine works contained in the list is, that with the exception of the Plateau roads they are all valuable *trade routes*, the improvement of which is of a real and lasting benefit to the public. Most, if not all of them, were set down in the printed programme of roads as works to be undertaken by District Councils as funds permitted, and they were selected for famine works mainly because their early completion would be a great gain to the District concerned. Every effort will be made to provide funds for completing such of the roads as the cessation of the famine has left unfinished, and for maintaining those which famine labour completed in annual repair. The Plateau roads constructed and improved by famine labour are of use to the Civil and Military residents of the Plateau, and the one towards Rorighat is also used by the general public.
2	Bankheri-Umardha Road ...	The work done will be useful, provided the earthbank is maintained and kept up till such time as it can be extended to Umardha and hard material can be purchased to make the whole length a 2nd or 1st class road.	
3	Sobhapur-Piparia Road ...	A useful Railway feeder and in addition a valuable link in the through road connection of Hoshangabad with Piparia Pachmarhi and Chhindwara. The work done is nearly all permanent and useful. A hard soling has been provided all the way.	
4	Piparia-Bankheri Road ...	This road is, in my opinion, of little use, running close to the Railway all the way and very few villages on the way. The money spent in boulders collected for metal that was never broken and never will be broken is thrown away. The first 4 miles from Piparia to Rampur village and the last 3 miles from a large village to Bankheri will have a limited use and may be worth keeping up.	
5	Bankheri-Dudhi Road ...	A road of very little use; there is practically nothing but an unsoled earthen bank which may be left to take care of itself. The work done was for the most part useful as far as it went.	
6	Piparia-Pachmarhi Road ..	All the work done on this road was of a distinctly permanent character and of public utility, material having been collected for several years' annual renewals in advance, and this year's renewals and repairs carried out.	

Commissioner of Nerbudda Division's opinion on the permanence and utility of works undertaken in the Hoshangabad District.—
(Received with Executive Engineer's No. 7645, dated 27th November 1897).

No.	Name of work.	Opinion of Executive Engineer.	Opinion of Commissioner.
7	Sobhapur-Bhatgaon Road ...	The work done on this road, a useful feeder road, is practically little more than an earthen bank which, if maintained, will be of permanent utility as an integral part of the future metalled road.	
8	Babai-Bagra Road ...	This charge includes 7 miles of newly made 1st class Railway feeder road and 14 miles of 3rd class old Bombay Road. The first named is a work of permanent character and the road provides a valuable outlet to the railway to the trade of a fertile area around Babai. The position of old Bombay road though only at present an earthen bank with a few miles soled here and there, is also a useful road for it does not run parallel to the railway as usual in the case of the old Bombay road but is to some extent a railway feeder. It is useful also that it forms part of the direct through road from Hoshangabad to Piparia.	
9	Harda-Handia Road ...	The Harda-Handia road, a first class metalled road, is the most important railway feeder road in the District; a very large amount of traffic comes across the Nerbudda at Handia from the Native States.	
10	Harda-Dekhna Road ...	This is the part of the Harda-Betul road that lies in the Hoshangabad District. The Harda-Betul road is a useful trunk road, the construction of which has long been advocated. The work now done on this section consists of an earthen bank unsoled for the first 20 miles which, if kept in repair, will be of permanent use as the basis of a road of higher class. For the greater part of the rest of the distance to Badnur, a *murum* covering has been provided to the bank advancing such portions a stage further.	

HOSHANGABAD

Abstract statement of Value

Sub-Division and name of Sub-Divisional Officer.	No. of Charge.	Name and class of work, and dates commenced and closed.	Value of work done at normal P. W. D. rates.	Total expenditure and No. of units relieved.			Percentage of gratuitous relief and special establishment, &c., over total expenditure.	
				Total expenditure including gratuitous relief.	Total expenditure excluding gratuitous relief.	Total number of relief workers.	Gratuitous relief.	Special establishment, tools, hutting, &c.
1	2	3	4	5	6	7	8	9
			Rs.	Rs.	Rs.	No.	Percentage.	Percentage.
Hoshangabad. Lalla Pravag Dass, from January to May. Mr. Ramchandra Rao, from June to October.	2	Babai-Bagra Road and Babai Section of old Bombay Road. **N. R. 6¾ miles.** **R. C. 14½ miles.** From 3rd December 1896 To 21st October 1897.	48,541	2,25,916	2,07,216	1,464,729	8	36
Lalla Pravag Dass, from January to June. Mr. Ramchandra Rao, from July to October.	3	Itarsi-Dhar Section of N.-W. Road. **R. P. 17 miles.** From 16th January 1897 To 10th October 1897.	26,277	1,27,276	1,21,807	1,127,385	4	23
Lalla Pravag Dass, from beginning to June. Mr. Ramchandra Rao, from June to October.	9 & 11	Semri-Sohagpur Section of old Bombay Road and Semri-Barkatch Road. **R. C. 11½ miles.** **N. R. 9¼ miles.** 11 From 25th March 1897 To 18th October 1897. 9 From 14th September 1897 To 18th October 1897. These two charges were amalgamated on 15th July 1897.	51,530	2,55,381	2,25,232	2,264,059	12	37
Lalla Pravag Dass, from May to June. Mr. Ramchandra Rao, from July to October.	13	Dharamkhundi Section of old Bombay Road. **R. C. 9 miles.** **R. P. 13 miles.** From 10th May 1897 To 31st October 1897.	22,775	62,357	57,320	5,51,943	8	41
		Total and averages for Hoshangabad Sub-Division.	1,49,123	6,70,930	6,11,575	5,408,116	9	35

RELIEF WORKS.

DISTRICT.

of Work done by Famine Labour.

Ratio of Famine to ordinary rates.		Work done and expenditure incurred per unit relieved.			Duration of work.	Remarks.
			Work done per unit relieved per diem.			N. R.....New road. R. C.....Raised in class. R. P.....Repairs. S. T.....Test work. P. W.....Piece-work. T. W.....Task-work. N. B.—"Earthwork, ordinary" denotes earthwork in banks or cuttings or earthen sides of roads in black or brown soil; average lead and vertical lift being 50 ft. and 5 ft., respectively.
Including gratuitous relief.	Excluding gratuitous relief.	Number of units relieved per rupee.	Earthwork ordinary.	Metal breaking.		
10	11	12	13	14	15	16
Ratio.	Ratio.	No.	Cft.	Cft.	Months.	
4·7	4·3	6	7	1	11	**T W.** from 3rd December 1896 to 21st October 1897. **P W.** from W. E. 22nd May 1897 to 21st October 1897. High rates due to the sudden crowding of people, and inexperience of sort of work they were called upon to do. When piece-work was introduced the condition of people was good. The effect of introduction of the system was rapid reduction of numbers. The strong left in large numbers for working in the fields. The really needy remained and did not fall off in condition.
4·9	4·6	9	6	0·7	10	**T. W.** from 16th January 1897 to 10th October 1897. **P. W.** from 5th June 1897 to 10th October 1897. High rate due to want of tools for the full number of workers on first arrival; their experience of this sort of work, high price of grain, expensive hutting and the difficulty of breaking and quarrying stone which was found to be very hard. For piece-work remarks *vide* Charge No. 2.
4·9	4·3	9	5	0·6	8	**T. W.** from 25th March 1897 to 18th October 1897. **P. W.** from 19th June 1897 to 18th October 1897 in Charge No. 9. **P. W.** from 22nd May 1897 to 18th October 1897 in Charge No. 11. High rate due to the sudden crowding of people and lack of tools for the whole number, inexperience of workers, expensive hutting and establishment, and shifting and maintenance of double camps. When piece-work was introduced the condition of the workers was good. The numbers began to fall steadily on the introduction of the system; most of the robust left the work.
2·7	2·4	9	10	...	6	**T. W.** from 10th May 1897 to 31st October 1897. **P. W.** from 22nd May 1897 to 31st October 1897. High rates due to hasty organization, expensive hutting, shifting and maintenance of double camps, inexperience of work-people and the stickiness of black cotton soil during rains on earthwork. When piece-work was introduced the condition of workers was good. Strong labourers left in large numbers for working in the fields. The really needy remained and did not fall off in condition.
4·5	4·1	8	7	0·8	9	

Abstract statement of Value

Sub-Division and name of Sub-Divisional Officer.	No. of Charge.	Name and class of work, and dates commenced and closed.	Value of work done at normal P. W. D. rates.	Total expenditure and No. of units relieved.			Percentage of gratuitous relief and special establishment, &c., over total expenditure.	
				Total expenditure including gratuitous relief.	Total expenditure excluding gratuitous relief.	Total number of relief-workers.	Gratuitous relief.	Special establishment, tools, hutting, &c.
1	2	3	4	5	6	7	8	9
			Rs.	Rs.	Rs.	No.	Percentage.	Percentage.
Harda. Lalla Pratap Dass, from January to June. Lieut. R. F. G. Bond, R. E., from June to July. Mr. Abdul Hakim Khan, from July to August. Lieut. Sheppard, R. E., from August to September. Mr. Abdul Hakim Khan, from September to October. Mr. Ramchandra Rao, from October to 31st October.	4	Harda-Handia Road and Harda-Timurni-Sodhalpur Road. **R. C. 13 miles.** From 10th January 1897 To 31st October 1897.	34,640	1,61,131	1,51,694	1,083,397	6	33
	10	Harda-Betul Road, Sodhalpur-Dekhma Section. **N. R. 22 miles.** From 10th January 1897. To 16th October 1897.	24,334	86,629	80,990	768,376	7	15
		Total and averages for Harda Sub-Division. ...	58,974	2,47,760	2,32,684	1,851,773	6	27
Singanama-Chhindwara Road. Babu J. N. Mittra.	1,2 & 3	Metal collection on Piparia-Pachmarhi Road. **R. P. 32 miles.** From 1st December 1896 To 28th March 1897.	86,837	1,58,084	1,56,095	702,592	1·0	24
	9	Constructing the first section of Sobhapur-Bhatgaon Road. **N. R. 3 miles.** From 6th June 1897 To 24th July 1897.	3,457	5,886	5,848	24,308	0·6	28
	1 B	Metal collection on Piparia-Pach-Road at Semarghat. From 3rd August 1897 To 18th August 1897.	6,259	10,459	9,563	115,793	9·0	26
	13	Improving Plateau Road ... **R. P. 6 miles.** From 4th August 1897 To 31st October 1897.	6,070	9,155	7,911	43,218	3·0	27

RELIEF WORKS.

DISTRICT.

of Work done by Famine Labour.

Ratio of Famine to ordinary rates.		WORK DONE AND EXPENDITURE INCURRED PER UNIT RELIEVED.			Duration of work.	REMARKS.
			WORK DONE PER UNIT RELIEVED PER DIEM.			N. R.....New road. R. C.....Raised in class. R. P.....Repairs. S. T.....Test work. P. W.....Piece-work. T. W.....Task work. N. B.—"Earthwork, ordinary" denotes earthwork in banks or cuttings or earthen sides of roads in black or brown soil; average lead and vertical lift being 50 ft. and 5 ft., respectively.
Including gratuitous relief.	Excluding gratuitous relief.	Number of units relieved per rupee.	Earthwork ordinary.	Metal breaking.		
10	11	12	13	14	15	16
Ratio.	Ratio.	No.	Cft.	Cft.	Months.	
4·7	4·3	7	7	0·9	10	**T. W.** from 10th January 1897 to 31st October 1897. **P. W.** from 3rd July 1897 to 31st October 1897. High rates due to heavy charges for establishment, hutting, conservancy, tools, &c., inexperience of workers. Water supply in particular was very expensive as water had to be carried by rail for several miles from the Railway Station. When piece-work was introduced the condition of workers was good.
3·6	3·3	9	7	...	10	**T. W.** from 10th January 1897 to 16th October 1897. **P. W.** from 20th September 1897 to 16th October 1897. High rates due to the work being difficult of access in the rains and expensive establishment; physical condition and inexperience of work people, and the difficulty in procuring pure water supply in the hot weather. On the introduction of piece-work with the limit of ½ wage, nearly 80 per cent. of the workers left the work, as it was almost ripe for closure. The condition of the people remained good.
4·3	3·9	7	7	0·9	10	
1·8	1·8	4	30	3·0	3	**T. W.** from 1st December 1896 to 28th March 1897. Consolidation of metal was carried out by contract and also quarrying rubble for metal breaking and carting. Metal half basalt which was very hard for workers who were unaccustomed to it, and half sandstone. Work done and expenditure incurred by the Civil Department has been included. Condition of workers good. Approximate proportion of dependants to workers 2 per cent. Small fines were inflicted for contumacy but not regularly. Organization hastily effected and staff inefficient.
1·7	1·6	4	32	...	2	**T. W.** from 6th June 1897 to 24th July 1897. Condition of relief-workers good. There was no sickness in this camp. The workers were paid according to the work turned out, this being a piece-work. Organization was hasty, the Charge was opened as an overflow for another Charge (Semri-Sohagpur). Staff was fairly efficient. Out of the whole length of 8 miles about 3 miles are banked and nalla crossings metalled.
1·6	1·5	11	15	2·0	2	**T. W.** from 3rd August 1897 to 18th September 1897. **P. W.** from 3rd August 1897 to 18th September 1897. Metal broken hard sandstone. Condition of workers fair. Proportion of non-workers to actual workers about 12 per cent. The workers were paid according to the work turned out, the system being piece-work. This is a very useful work as the stock of metal collected will last for several years. When piece-work was introduced, the condition of the workers was good. Nearly 700 able-bodied workers who were really not in need of relief went away. The condition of the remainder was good and improved.
1·3	1·3	5	30	...	3	**T. W.** from 4th August 1897. A few dry stone culverts were done by contract. Condition of workers good. Proportion of non-workers to workers about 5 per cent. No sickness nor shifting of camps. The workers were fined for short work.

Abstract statement of Value

Sub-Division and name of Sub-Divisional Officer.	No. of Charge.	Name and class of work, and dates commenced and closed.	Value of work done at normal P. W. D. rates.	TOTAL EXPENDITURE AND NO. OF UNITS RELIEVED.			PERCENTAGE OF GRATUITOUS RELIEF AND SPECIAL ESTABLISHMENT, &C., OVER TOTAL EXPENDITURE.	
				Total expenditure including gratuitous relief.	Total expenditure excluding gratuitous relief.	Total number of relief workers.	Gratuitous relief.	Special establishment, tools, hutting, &c.
1	2	3	4	5	6	7	8	9
			Rs.	Rs.	Rs.	No.	Percentage.	Percentage.
Singanama-Chhindwara Road. BABU J. N. MITTRA.	12	Raising to class I, Bankheri-Dhudi Section of old Bombay Road. **R. C. 7 miles.** From 2nd April 1897 To 16th October 1897.	19,411	73,163	69,467	918,092	5·0	26
	12 *a*	Constructing Bankheri-Umardha Road. **R. C. 7 miles.** From 9th May 1897. To 16th October 1897.	6,759	44,176	41,976	...	5·0	27
	12 & 1	Raising to Class II the Piparia-Bankheri Section of old Bombay Road. **R. C. 12 miles.** From 9th April 1897 To 16th October 1897.	23,664	35,453	41,976	...	8	30
	1 *a*	Completing the Piparia-Sandia Road. **R. C. 12 miles.** From 1st December 1896 To 28th October 1897.	58,227	1,04,897	85,892	1,478,414	18	23

DISTRICT.

of Work done by Famine Labour.

Ratio of Famine to ordinary rates.		Work done and expenditure incurred per unit relieved.			Duration of work.	Remarks.
			Work done per unit relieved per diem.			N. R.....New road. R. C.....Raised in class. R. P.....Repairs. S. T.....Test work. P. W.....Piece-work. T. W.....Task-work. N. B.—"Earthwork, ordinary" denotes earthwork in banks or cuttings or earthen sides of roads in black or brown soil; average lead and vertical lift being 50 ft. and 5 ft., respectively.
Including gratuitous relief.	Excluding gratuitous relief.	Number of units relieved per rupee.	Earthwork ordinary.	Metal breaking.		
10	11	12	13	14	15	16
Ratio.	Ratio.	No.	Cft.	Cft.	Month.	
3·8	3·1	8	5	0·7	7	**T. W.** from 2nd April 1897 to 16th October 1897. Condition of workers good. Proportion of non-workers 8 per cent. of actual workers. Cholera first broke out here and caused great difficulties. Camp had to be shifted several times as work proceeded. The workers were dealt with very leniently at times of epidemic and but little fining was done. Organization carried out hastily owing to epidemics. Staff was poor. Section of road completed as 3rd class. This work was all done in the hot weather, and long rest in the middle of the day had to be given to keep the workers in health.
6·5	6·2	...	...	...	6	**T. W.** from 9th May 1897 to 16th October 1897. **P. W.** from 12th September 1897 to 8th October 1397. Condition not good. The opening of this Charge was the result of an outbreak of cholera on another, the uninfected gangs being drafted to this work. The camp was shifted several times as the work proceeded. The workers had to be dealt with very leniently as cholera raged for 2 months and no fines were then inflicted. The workers were also given long rest during the heat of the day by Civil Surgeon's orders. Organization had to be effected very quickly on account of the epidemic. Staff was poor. The large numbers became almost unmanageable at times and the work agents were of a poor order. When piece-work with the limit of D. wage was introduced, the condition of the people was good. It produced no effect on the numbers. The condition of the people remained the same.
1·5	1·2	...	...	2·0	7	**T. W.** from 9th April 1897 to 16th October 1897. **P. W.** from 17th May 1897 to 31st July 1897. Boulder and stone for metal breaking collected and carted by contract. Metal broken from hard boulders. Condition of workers fair but deteriorated in rains. Proportion of non-workers to actual workers 10 per cent. No sickness except at time of cholera outbreak. Camp had to be shifted several times. The workers were fined for short work but irregularly. Organization satisfactory except when disturbed by epidemic. Staff poor. Of the 12 miles 2 miles are left incomplete; the rest completed as 3rd class. When piece-work was introduced the condition of workers was good and many able-bodied persons left the work. The condition of the workers remained good and improved.
1·8	1·5	8	5	...	10	**T. W.** from 1st December 1896 to 12th October 1897. **P. W.** from 8th August 1897 to 28th October 1897. Carting metal and *muram* to road side was done by contract. Metal broken hard basalt and boulders. Work done and expenditure incurred by the Civil Department has been included. Condition fair in the hot weather; later on condition deteriorated. Proportion of non-workers to workers 30 per cent. This large proportion partly due to influx of children from neighbouring villages to the kitchen. Two severe outbreaks of cholera lasting 6 weeks on each occasion. The workers were fined but at times of epidemic they were treated leniently. Organization had to be hastily effected when large numbers crowded on the work as was often the case. Want of sufficient tools felt at commencement. Staff was sufficient.

HOSHANGABAD

Abstract statement of Value

Sub-Division and name of Sub-Divisional Officer.	No. of Charge.	Name and class of work, and dates commenced and closed.	Value of work done at normal P. W. D. rates.	TOTAL EXPENDITURE AND NO. OF UNITS RELIEVED.			PERCENTAGE OF GRATUITOUS RELIEF AND SPECIAL ESTABLISHMENT, &C., OVER TOTAL EXPENDITURE.	
				Total expenditure including gratuitous relief.	Total expenditure excluding gratuitous relief.	Total number of relief-workers.	Gratuitous relief.	Special establishment, tools, hutting, &c.
1	2	3	4	5	6	7	8	9
			Rs.	Rs.	Rs.	No.	Percentage.	Percentage.
	1	Raising to class II the Piparia-Sobhapur Road. **R. C.** From 10th May 1897. To 28th October 1897.	20,009	35,488	30,382	...	14	24
		Total and averages for Singanama-Chhindwara road Sub-Division.	2,30,693	4,75,765	4,39,666	3,282,417	8	24
		Total and averages for Hoshangabad District.	4,38,790	13,94,455	12,83,925	10,542,306	8	30

DISTRICT.

of Work done by Famine Labour.

Ratio of Famine to ordinary rates.		Work done and expenditure incurred per unit relieved.			Duration of work.	Remarks.
Including gratuitous relief.	Excluding gratuitous relief.	Number of units relieved per rupee.	Work done per unit relieved per diem.			N. R.....New road. R. C.....Raised in class. R. P.....Repairs. S. T.....Test work. P. W.....Piece-work. T. W.....Task-work. N. B.—"Earthwork, ordinary" denotes earthwork in banks or cuttings or earthen sides of roads in black or brown soil; average *lead* and *vertical lift* being 50 ft. and 5 ft., respectively.
			Earthwork ordinary.	Metal breaking.		
10	11	12	13	14	15	16
Ratio.	Ratio.	No.	Cft.	Cft.	Months.	
1·7	1·5	...	...	...	6	**T. W.** from 10th May 1897 to 28th October 1897. **P. W.** from 8th August 1897 to 28th October 1897. A small amount of *muram* carted by contract. Condition fair but deteriorated latterly. Proportion of non-workers to actual workers about 13 per cent. Cholera raged in this Charge for nearly 2 months in the hot weather and again with less force for 6 weeks in the rains. It retarded work for various reasons, one being that the workers could not be spread out along the road to work at the road banks for fear of infecting the villages near the road, and had to be kept near camp on less useful work and little of it; fines were inflicted for short work but irregularly. Organization had often to be hastily effected. Staff was sufficient. Work completed. A useful work; the road, a fairly important railway feeder, being raised from 3rd to 2nd class.
2·1	1·9	7	21	1·9	5	
3·2	2·9	8	14	1·3	7	

NIMAR DISTRICT.

Relief operations from November 1896 to October 1897.

Brief account of relief operations.

1. Famine relief operations were started in November 1896 and closed in October 1897. Only 3 Charges were opened, of which two were closed in February 1897 and one kept open till the close of operations. As to the retention of this Charge the following remarks were made at the Famine Conference held at Khandwa on the 24th July 1897 :—

"There is only one relief-work at present open in this district, that on the Mohgat road. The latest return (17th July) showed 225 task-workers, 88 piece-workers and 55 dependants (children) on this work ; but it is known that these numbers have risen considerably since the 17th, and it is believed that the total is now about 500. It is thought necessary to have a work of some kind in the neighbourhood of Khandwa, to afford employment to persons who are discharged from the poor-house as fit to work, and persons sent in from Harsud by the Tahsildar. The majority of workers are in more or less reduced condition, and no contractor working on ordinary terms would employ them. The work must therefore be continued as a famine work, on the combined task and piece-work system. The labourers are to be classified as to physique by the Hospital Assistant, and only those not physically fit for piece-work are to be admitted to task-work."

Particulars of operations are as follows :—

Particulars.	Nimar District. (3 Charges.)	Average per Charge.	Remarks.
Total area	3,928	1,309·3 sq. miles.	One-third of the whole area was affected.
Affected area served	3,928	1,309·3 „	
Total population	285	95·0 thousands	
Affected population served ...	285	95·0 „	
Average daily attendance ...	1·13	0·37 „	
Total number of day-units relieved ...	0·17	0·056 millions.	
	Rs.	Rs.	
„ Expenditure	0·19	0·063 lakhs.	
	Cft.	Cft.	
„ Earthwork done	4·60	1·53 „	
„ Metal collection	0·66	0·22 „	
„ *Muram* „	.....	..... „	
„ Consolidation	0·55	0·18 „	
	No	No.	
„ Length of road-work ...	16	5·3 miles.	

Condition of workers, management, &c.

2. The condition of workers was feeble and the proportion of infirms and dependants to actual workers varied from 1 in 3 to 1 in 7. There was no sickness or shifting of camps, and the management was satisfactory.

System of work.

3. The two works which were closed in February 1897 were carried out entirely on the task-work system. The third road, *viz.*, the Khandwa-Mohgat road, was commenced on task-work ; piece-work was added in July 1897, and continued to the end in combination with task-work.

Expenditure.

4. The total expenditure incurred and the number of day-units relieved were Rs. 19,172 and 169,030, respectively ; the percentage of total outlay being made up as follows :—

Percentage of wages, gratuitous relief and miscellaneous charges.

Wages	66
Gratuitous relief	8
Miscellaneous	26
Total ...	100

Expenditure per day-unit inclusive of all charges.

The expenditure per day-unit inclusive of all charges was :—

Maximum	...	...	24 pies (or 8 per rupee).
Minimum	...	...	22 „ (or 9 „).
Average	...	...	22 „ (or 9 „).

Average expenditure per day-unit excluding miscellaneous but including wages and gratuitous relief.

The average expenditure per day-unit excluding cost of special establishment, hutting, conservancy, tools and other miscellaneous charges was 16 pies against 22 pies inclusive of all charges.

Average wages earned.

the average wages earned were approximately as follows :—

Per worker	...	...	... 18 pies
„ dependant	...	...	... 11 „

Average price of food-grains.

the average price of food-grains being 8 seers per rupee against 14 seers per rupee normal.

Work done.

5. The out-turn of work is shewn below :—

Particulars.	(I) Earth-work * ordinary.	(II) Metal-breaking.	Remarks.
1. Per day-unit : ...			* Cutting or bank in ordinary black or brown soil; lead 50 ft., lift 5 ft., equivalent to a "reduced lead" of 146 ft. by Mr. Higham's and 186 ft. by the C. P. standard.
Maximum ...	24	...	
Minimum ...	11	1·0	
Average ...	17	1 0	
2. Per worker : (average) ...	21	1·2	
3. Per digger or male unit: (average.)	84	...	
4. Per carrier or female and child unit: (average) ...	28	...	

Ratio of famine to ordinary rates of work.

6. The ratio of famine to ordinary rates works out as follows :—

	Maximum.	Minimum.	Average.
Including gratuitous relief ...	2·1	1·0	1·9
Excluding ...	1·9	1·0	1·7

Permanence and utility of works.

7. The Executive Engineer makes the following remarks in which the Commissioner concurs :—

"The work done is all of a permanent character ; the road has been *murammed* and metal has been collected by road side." *

* *Vide* Executive Engineer's No. 7645, dated 27th November 1897.

Abstract statement of Value

Sub-Division and name of Sub-Divisional Officer.	No. of Charge.	Name and class of work, and dates commenced and closed.	Value of work done at normal P. W. D. rates.	TOTAL EXPENDITURE AND NO. OF UNITS RELIEVED.			PERCENTAGE OF GRATUITOUS RELIEF AND SPECIAL ESTABLISHMENT, &C., OVER TOTAL EXPENDITURE.	
				Total expenditure including gratuitous relief.	Total expenditure excluding gratuitous relief.	Total number of relief-workers.	Gratuitous relief.	Special establishment, tools, hutting, &c.
1	2	3	4	5	6	7	8	9
			Rs.	Rs.	Rs.	No.	Percentage.	Percentage.
Nimar Sub-Division. Rai Sahib ISHWARI PRASAD, Sub-Divisional Officer.	1	Harsud-Kaliam Road ... **N. R. 10 miles.** From 4th December 1896 To 24th February 1897.	1,971	1,972	1,910	15,387	3	41
	2	Burhanpur Railway Station Road. **R. P. 3 miles.** From 27th November 1896 To 28th February 1897.	1,700	3,164	2,928	29,460	7	27
Nimar Sub-Division. Rai Sahib ISHWARI PRASAD, up to 16th April 1897. Lieut. HAWKSLEY, from 17th April 1897 to 25th September 1897. PANDIT SHEO BALAK, from 26th September 1897 to end of work.	3	Khandwa-Mohgat Road ... **R. C. 3 miles.** From 25th January 1897 To 23rd October 1897.	6,603	14,036	12,793	124,183	9	23
		Total and averages for Nimar District ...	10,274	19,172	17,631	169,030	8	26

RELIEF WORKS.

DISTRICT.

of Work done by Famine Labour.

Ratio of Famine to ordinary rates.		Work done and expenditure incurred per unit relieved.			Duration of work.	Remarks.
Including gratuitous relief.	Excluding gratuitous relief.	Number of units relieved per rupee.	Work done per unit relieved per diem.			N. R.....New road. R. C.....Raised in class. R. P.....Repairs. S. T.....Test work. P. W.....Piece-work. T. W.....Task-work. N. B.—"Earthwork, ordinary" denotes earthwork in banks or cuttings or earthen sides of roads in black or brown soil; average lead and vertical lift being 50 ft. and 5 ft., respectively.
			Earthwork ordinary.	Metal breaking.		
10	11	12	13	14	15	16
Ratio.	Ratio.	No.	Cft.	Cft.	Months.	
1·0	1·0	8	24	...	3	**T. W.** from 4th December 1896 to 24th February 1897. Expenditure incurred by Civil Department is included. Condition of workers was fair. Proportion of infirms and dependants to workers was 1 to 3. No sickness. Short wages were paid according to short work. Organization of gangs good. Staff efficient. The famine rates are practically ordinary P. W. D. rates which is due to the fact that the number of workers was small and the organization good.
1·8	1·7	9	...	1	3	**T. W.** from 27th November 1896 to 28th February 1897. Metal broken hard boulder. Some work was done and expenditure incurred by Civil Department which has been included. Condition of workers weak. Proportion of infirms and dependants to workers 1 to 7. No sickness or shifting of camps. Fines were imposed according to the shortness of work. Organization of gangs good; staff sufficient. Work completed by famine labour. High rates for metal breaking due to the fact that there were very few men on the work, but mostly women who were quite unaccustomed to this sort of labour. The workers were nearly all weavers, of whom there are a large number at Burhanpur; the numbers were never large, there being all through a demand for Burhanpur fabrics. In May a fire in the town destroyed existing stocks, and from that time forth the weavers had plenty of occupation.
2·1	1·9	9	11	1	9	**T. W.** from 25th January 1897 to 23rd October 1897. **P. W.** from 8th July 1897 to 23rd October 1897. Metal broken hard basalt. Condition of relief-workers very weak. Proportion of infirms and non-workers to actual workers was as 1 to 4. No sickness or shifting of camps. No fines were imposed except on piece-workers. Organization of gangs was not good. Staff was efficient and complete in every way. Work completed except metal collection for ¼ mile and metal consolidation for 2 miles. Rates high due to condition of workers being very poor. A large number of the workers were Korkus and of jungle tribes with no experience. They were put in Class D and did little or no work. When piece-work was introduced, the condition of the people was fair. The introduction of the system drove away nearly 100 to 200 able-bodied workers who were not really in need of relief. The condition of the people improved as they could earn good wages on piece-work.
1·9	1·7	9	17	1·0	5	

BETUL DISTRICT.

Relief Operations from December 1896 to November 1897.

Brief account of famine-relief operations.

1. Famine-relief operations began early in December 1896 and ended in November 1897. There were 9 relief Charges approximately 12 miles apart. Labour was chiefly employed on raising existing roads in class and in collection of metal for repairs, the total length of road-work being 99 miles. The average daily attendance on each Charge was nearly 2,000, or approximately 1 out of every 18 of the population affected. The total number of day-units relieved from the commencement to the close of operations was over 3 millions and the total expenditure over 3½ lakhs of rupees.

The main particulars are as follows :—

Particulars.	Betul District (9 Charges).	Average per Charge.	Remarks.
Total area	3,824	425 sq. miles.	The whole area was affected.
Affected area served	3,824	425 „	
Total population	323	35·9 thousands.	
Affected population served	323	35·9 „	
Average daily attendance	17·7	1·97 „	
Total number of day-units relieved ...	3·19	0·36 millions.	
	Rs.	Rs.	
„ Expenditure	3·40	0·38 lakhs.	
	Cft.	Cft.	
„ Earthwork done	173·27	19·25 „	
„ Metal collection	9·21	1·03 „	
„ Muram „	8·27	0·92 „	
„ Consolidation	3·10	0·35 „	
	No.	No.	
„ Length of road-work	99·00	11·00 miles.	

Condition of relief-workers, management, &c.

2. The condition of many of the workers was comparatively feeble and they suffered severely from outbreaks of cholera. Scarcity of water was pretty general during the hot weather, and during the rains* the Commissioner remarked as follows :—" .....It is beyond our powers to " shield the feeble from the effects of the rainy season following upon an unusually " exhausting hot weather. Under the circumstances it is not, I think, surprising that " the death-rate should be high.†" Several works were started at short notice, *viz.*, 2 in May, 1 in June and 2 in August 1897, and the rains interfered largely with the progress of work. Camps had to be frequently shifted and the prices of grain ruled high. The management was, however, excellent and the rates were decidedly the lowest in the whole of the Central Provinces, being barely 40 per cent. in excess of ordinary rates exclusive of gratuitous relief, and 60 per cent. including all charges. The supervision in this district was particularly good, Sergeant Desmond being a most energetic and excellent officer who spared no effort to look into everything himself, and whose management and treatment of the workers left nothing to be desired.

* July 1897.

† Death-rate during famine, 71·9 per mille against 34·7 normal, or more than double.

System of work.

3. Works were at first started on the task-work system. Piece-work was added in June on all Charges. One Charge* was closed prior to introduction of piece-work and a new Charge† opened in August on the task-work system as a special measure. Only the able-bodied were employed on piece-work, the infirms being put on task-work. In a special report, No. 849-C., dated the 21st August 1897, the Commissioner reported as follows:— "As the Deputy Commissioner had, in his comments on the weekly famine statements, indicated his opinion that the introduction of the piece-work system on the relief-works had aggravated the distress because the very name of a contractor frightened the people and because the majority were quite unable to earn a subsistence by piece-work, I endeavoured to ascertain if there was any substantial basis for this view of the matter. On my way up to Betul from Itarsi I had inspected two piece-works, one on the Hoshangabad side and one at Nimpani in the Betul District. At both places I found the piece-workers in good condition, and among them were not a few old men and women who apparently found no difficulty in earning a subsistence. Each camp had its task-work as well: and at Nimpani the task-workers included a large proportion of able-bodied persons who were certainly not doing an honest day's work for their wages. This was because the Deputy Commissioner had latterly insisted on workers being given the option of joining either task-work or piece-work. On the Hoshangabad work there were no contractors, the measurements and payments being made departmentally. On the Nimpani work there was indeed a contractor, but he had nothing to do with measuring and paying for the work. So far as the workers were concerned he was practically non-existent; and it was not easy to understand what precise function he filled and why he could not have been dispensed with altogether. I ascertained that wherever piece-work was in force in the Betul District, the contractor was thus relegated to the background. I was also aware that the task-work system, as worked in the Betul District by the Sub-Divisional Officer, had been practically a system of payment-by-results (within the limit of the maximum allowed for the task), the defaulters being fined in proportion to their default. The officer had in fact been very successful in obtaining a good outturn from his workers, and the introduction of the piece-work system involved no very radical change of method beyond the raising of the maximum wage which the more skilled and industrious "hands" could earn by their labours. So that the conclusion at which I arrived (after inspecting the Sasundra work in the Multai Tahsil as well) was that the piece-work system was in no way blameable for the exacerbation of distress. To remove even the suspicion of such an effect, piece-work had been suspended on the Sawalmenda section of the Badnur-Ellichpur Road about the middle of July, but the number of workers declined instead of increasing."

Expenditure.

4. The total expenditure incurred and the number of day-units relieved were Rs. 3,39,734 and 3,189,064, respectively: the percentage of the total outlay being made up as follows:—

Percentage of wages, gratuitous relief and miscellaneous charges.

Wages	...	...	77
Gratuitous relief	...	...	10
Miscellaneous	...	...	13
			100

Expenditure per day-unit inclusive of all charges.

The expenditure per day-unit inclusive of all charges was—

Maximum	...	28 pies (or 7 per rupee)
Minimum	...	16 „ („ 12 „ „)
Average	...	22 „ („ 9 „ „)

Average expenditure per day-unit excluding "miscellaneous" but including wages and gratuitous relief.

The average expenditure per day-unit excluding cost of special establishment, hutting, conservancy, tools and other miscellaneous charges was 18 pies against 22 pies inclusive of all charges.

Average wages earned.

the average wages earned were approximately as follows:—

Per worker	...	...	18 pies.
„ dependant	...	...	16 „

Average price of food-grains.

the average price of food-grains being 8 seers per rupee against 16 seers per rupee normal.

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*No. 3-A Badnur-Harda Road.

†No. 8 „ -Ellichpur Road.

Work done.

5. The out-turn of work is given below :—

Particulars.	I.—Earth-work ordinary.*	II.—Metal breaking.	Remarks.
	Cft.	Cft.	
1. Per day-unit—			
Maximum	18	2	*Cutting or bank in ordinary black or brown soil, lead 50 feet, lift 5 feet, equivalent to a "reduced lead" of 146 feet by Higham's and 186 feet by C. P. standard.
Minimum	11	1·7	
Average	15	1·9	
2. Per worker (average) ...	17	2·2	
3. Per digger or male-unit (average) ...	68	...	
4. Per carrier or female and child-unit (average).	23	...	

Ratio of famine to ordinary rates of work.

6. The ratio of famine to ordinary rates works out as follows :—

	Maximum.	Minimum.	Average.
Including gratuitous relief ...	2·1	1·2	1·6
Excluding „ „ ...	1·6	1·1	1·4

Permanence and utility of works.

7. The works carried out are useful and of a permanent character. The Commissioner's remarks received with Executive Engineers No. 7645, dated the 27th November, are as follows:— "All "roads.....are valuable trade-routes the improvement of which is of a real and "lasting benefit to the public."

Abstract Statement of Value

Sub-Division and name of Sub-Divisional Officer.	No. of Charge.	Name and class of work, and dates commenced and closed.	Value of work done at normal P. W. D. rates.	Total Expenditure and Number of units relieved.			Percentage of gratuitous relief and Special Establishment, &c., over total expenditure.	
				Total expenditure including gratuitous relief.	Total expenditure excluding gratuitous relief.	Total number of relief-workers.	Gratuitous relief.	Special Establishment, tools, hutting, &c.
1	2	3	4	5	6	7	8	9
			Rs.	Rs.	Rs.	No.	Percentage.	Percentage.
Betul Sub-Division. Sergeant J. Desmond, Sub-Divisional Officer.	1	*Gitti* collection North-west Road, Dhar to Betul. From 8th December 1896. To 27th November 1897.	57,880	90,044	82,527	808,538	8	12
	2 (*a*) and 6	Constructing Badnur-Ellichpur Road Kheri-Badnur section. **R. C.** * From 28th December 1896. To 4th November 1897.	40,585	64,362	58,763	612,059	9	20
	3 (*a*)	Constructing Badnur-Harda Road. Kheri-Chicholi section. **R. C.** * From 20th January 1897. To 5th June 1897.	39,322	48,605	46,352	567,365	5	8
	4	Constructing Badnur-Ellichpur Road, Jhallar-Sawalmenda section. **R. C.** † From 15th May 1897. To 21st August 1897.	12,151	17,204	14,052	171,095	18	18

* Charges Nos. 2 (*a*), 6, 3 (*a*) and 3 (*b*) together 36 miles.
† Charges Nos. 2 (*b*), 8 and 4 together 28 miles.

RELIEF WORKS.

DISTRICT.

of Work done by Famine Labour.

Ratio of Famine to Ordinary rates.		Work done and Expenditure incurred per unit relieved.			Duration of work.	Remarks.
			Work done per unit relieved per diem.			N. R.....New road. R. C... ...Raised in Class. R. P. ...Repairs. S. T.....Tes -work. P. W.....Piece-work. T. W.....Task-work. *N. B.*—"Earthwork, ordinary" denotes earthwork in banks or cuttings or earthen sides of roads in black or brown soil; average lead and vertical lift being 50 ft. and 5 ft., respectively.
Including gratuitous relief.	Excluding gratuitous relief.	Number of units relieved per rupee.	Earthwork, ordinary.	Metal breaking.		
10	11	12	13	14	15	16
Ratio.	Ratio.	No.	Cft.	Cft.	Months.	
1·6	1·4	9	18	2	11	T. W. from 8th December 1896 to 27th November 1897. P. W. from 19th June 1897 to 27th November 1897. High rates due to weakness of workers on opening of work. Work done of great utility. The condition of the workers who were put on piece-work was good. One week after the introduction of piece-work, the numbers doubled and remained stationary for six weeks. In the next three weeks the number gradually rose up to 1,300. Then it began to fall off owing to workers leaving for their fields. The condition of the people remained the same. The piece-workers improved as they could easily earn a B wage and yet have time for rest.
1·6	1·5	9	14	2	10	T. W. from 11th January 1897 to 4th November 1897. P. W. from 14th June 1897 to 4th November 1897, Charge No. 2. From 17th June 1897 to 4th November 1897, Charge No. 6. High rates due to cholera, want of grain and water, also shifting of camps and difficulties in the rains. Work done is of great utility and value. The condition of the workers who were put on piece-work was good. In Charge No. 2 (*a*) the system became at once popular and the numbers increased. In Charge No. 6 nearly 1 000 left for their homes. Then numbers rose for about six weeks and fell in the next three weeks as the people went off to work in the fields. The condition of the workers remained the same. The piece-workers improved as they could easily earn a B wage and yet have time for rest.
1·2	1·1	12	15	...	5	T. W. from 20th January 1897 to 5th June 1897. High rates due to cholera and scarcity of grain and water. Work done of great use and value.
1·4	1·2	10	15	...	3	T. W. from 15th May 1897 to 21st August 1897. P. W. from 19th June 1897 to 10th July 1897. High rates due to cholera, shifting of camp, &c. Works done of utility and value. The condition of the workers put to piece-work was good. The numbers remained steady for three weeks and then it was made entirely a task-work Charge to provide for the weakly persons of Charge No. 2. The condition of the workers remained the same and that of the piece-workers improved.

Abstract Statement of Value

Sub-Division and name of Sub-Divisional Officer.	No. of charge.	Name and class of work, and dates commenced and closed.	Value of work done at normal P. W. D. rates.	Total Expenditure and Number of units relieved.			Percentage of gratuitous relief and special establishment, &c., over total expenditure.	
				Total expenditure including gratuitous relief	Total expenditure excluding gratuitous relief.	Total number of relief-workers.	Gratuitous relief.	Special establishment, tools, hutting, &c.
1	2	3	4	5	6	7	8	9
			Rs.	Rs.	Rs.	No.	Percentage.	Percentage.
Betul Sub-Division. Sergeant J. Desmond, Sub-Divisional Officer.	3 (*b*)	Constructing Badnur-Harda Road, Chirapatla-Dekhna section. **R. C.** * From 10th May 1897. To 8th November 1897.	13,295	22,721	19,488	179,810	14	17
	2 (*b*)	Constructing Ellichpur-Badnur Road, Kheri-Jhallar section. **R. C.** † From 5th June 1897. To 27th November 1897.	46,231	79,611	72,469	719,182	9	1
	7	*Gitti* collection, Betul-Multai Road, Multai-Chichenda section. **R. C. 8 Miles.** From 7th August 1897. To 12th November 1897.	5,015	9,340	7,682	79,702	18	1
	8	Constructing Badnur-Ellichpur Road, Sawalmenda-Dhaba section. **R. C.** † From 28th August 1897. To 15th November 1897.	3,681	7,847	5,806	51,313	26	9
		Total Betul District and Sub-Division.	2,18,160	3,39,734	3,07,139	3,189,064	10	13

* *Vide* Charges Nos. 2 (*a*), 6 and 3 (*a*).
† *Vide* Charge No. 4.

RELIEF WORKS.

DISTRICT.

of Work done by Famine Labour.

Ratio of Famine to Ordinary rates.		Work done and expenditure incurred per unit relieved.			Duration of work.	Remarks.
			Work done per unit relieved per diem.			N. R.....New road R. C.....Raised in class. R. P.....Repairs. S. T.....Test-work. P. W.....Piece-work. T. W.....Task-work.
Including gratuitous relief.	Excluding gratuitous relief.	Number of units relieved per rupee.	Earthwork, ordinary.	Metal breaking.		*N. B.*—"Earthwork, ordinary" denotes earthwork in banks or cuttings or earthen sides of roads in black or brown soil; average lead and vertical lift being 50 ft. and 5 ft., respectively.
10	11	12	13	14	15	16
Ratio.	Ratio.	No.	Cft.	Cft.	Month.	
1·7	1·5	7	11	...	6	**T. W.** from 10th May 1897 to 8th November 1897. **P. W.** from 3rd July 1897 to 8th November 1897. High rates due to want of grain and water and severe outbreak of cholera. Work done is of great utility, but should be looked after in rains. The condition of the workers put on piece-work was good. The numbers remained stationary for 8 weeks when 500 left for the fields and the remainder worked on contentedly. The condition of the workers remained the same and the piece-workers improved as they could easily earn a B wage and yet have time for rest.
1·7	1·6	9	16	...	6	**T. W.** *Nil.* **P. W.** from 14th June 1897 to 28th November 1897. High rates due to the rains interfering with progress. Work was nearly all ghât work. The condition of the workers who were put on piece-work was good. The **P. W.** system at once became popular and numbers increased. The condition remained the same, and the piece-workers improved as they could easily earn a B wage and yet have time for rest.
1·8	1·5	9	...	1·7	3	**T. W.** from 7th August 1897 to 15th October 1897. **P. W.** from 20th October 1897 to 11th November 1897. High rates due to indulgence shown to workers by Civil authorities. Work done is of utility and Multai-Chichenda Section should be completed there being a lot of moorum at site. The condition of the workers who were put on piece-work was good. It was recognized that a large proportion of the workers were nothing but loafers from Multai. On removing the camp for a distance of 5 miles most of the people deserted. The condition remained the same.
2·1	1·6	7	16	...	3	**T. W.** from commencement, 28th August 1897 to close, 15th November 1897. High rates due to starting in the rains at very short notice. Hutting had to be provided and extra expense incurred for a large number of dependants. Work done is of utility and the section should be completed. Owing to late start little could be done towards completion.
1·6	1·4	9	15	1·9	6	

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NARSINGHPUR DISTRICT.

Relief operations from January 1897 to November 1897.

1. Famine relief operations were commenced under Civil officers in December 1896, and taken over by the P. W. D. early in January 1897 and were closed by end of November 1897. There were altogether 10 Charges, approximately 10 miles apart, the road-work undertaken being as follows :—

Brief account of famine relief operations.

Description.	Number.	Length.
Construction of new roads	4	46 miles.
Raising existing roads in class	5	38 „
Repairs to existing roads	1	23 „
Total ...	10	107 miles.

Over one-tenth of the population of the district sought relief on works under the management of the Public Works Department, the average daily attendance on each Charge being nearly 4,000. The total number of day-units relieved from commencement to close of operations was over 7 millions and the total expenditure, including all charges, over 8¼ lakhs of rupees. The broad facts in connection with the operations in this District are as follows :—

Particulars.	Narsinghpur District. (10 Charges)	Average per Charge.	Remarks.
Total area	1,916	192 sq. miles.	
Affected area served	1,916	192 „ „	The whole area was affected.
Total population	367	36·7 thousands.	
Affected population served ...	367	36·7 „	
Average daily attendance ...	40	4 „	
Total No. of day-units relieved ...	7·11	0·71 millions.	
	Rs.	Rs.	
„ Expenditure	8·35	0·84 lakhs.	
	Cft.	Cft.	
„ Earthwork executed ...	241·2	24·1 „	
„ Metal collection	27·2	2·7 „	
„ *Muram* „	2·6	0·3 „	
„ Consolidation	3·3	0·3 „	
	No.	No.	
„ Length of road-work ...	107·0	10·7 miles.	

2. The rush of people seeking relief was generally very great; and the formation of gangs and distribution of work was consequently attended with considerable difficulty. From 10,000 to 18,000 people on more than one occasion crowded to a single work at one time and where it was impossible to provide more than 2 Charges. Nearly all the camps suffered severely from outbreaks of cholera, and the neighbourhood of one of the Charges* became so unhealthy that frequent changes in the establishment had to be made. The death-rate of the district during the period under review was nearly double that of normal years (78·6 per mille against 40·9); but though for various reasons the progress of work was so largely interfered with, the management on the whole was excellent. Some credit is due to the Sub-Divisional Officer, Mr. Bishan Swarup, Assistant Engineer, who though young and inexperienced worked hard and zealously throughout a somewhat trying time.

Condition of relief-workers, management, &c.

* Narsinghpur-Chhindwara Road.

System of work.

3. Of the 10 works carried out by famine labour, 4 were on the task-work system only. On the remaining 6, piece-work was introduced between June and August 1897. On its introduction under the orders of May 1897 there was a gradual but general rise in numbers until the August rules came into force, when the numbers began to fall again as the people could then get work in the fields. The condition of the workers was good and remained so. The following figures will shew the effect of piece-work on the rates:—

System of work.	No. of works under the system.	Ratio of famine to ordinary rates exclusive of gratuitous relief.
Purely task-work	4	2·8 (average.)
Task-work and piece-work	6	2·5 (,,)
	10	2·6 (average.)

Expenditure.

4. The total expenditure incurred and number of day-units relieved were Rs. 8,34,224 and 7,110,012 respectively. The percentage of total outlay was made up as follows:—

Percentage of wages, gratuitous relief and miscellaneous charges.

Wages	67
Gratuitous Relief	6
Miscellaneous	27
	100

Expenditure per day-unit inclusive of all charges.

The expenditure per day-unit inclusive of all charges was:—

Maximum	32 pies (or 6 per rupee)
Minimum	14 ,, (or 14 ,, ,,)
Average	22 ,, (or 9 ,, ,,)

Expenditure per day-unit exclusive of miscellaneous charges.

The average expenditure per day-unit excluding cost of special establishment, tools, hutting and other miscellaneous charges, was 16 pies against 22 pies inclusive of all charges.

Average wages earned.

The average wages earned were as follows:—

Per worker	18 pies.
,, dependant	8 ,,

Average price of food-grains.

the average price of food-grains being some 8 seers against 14 seers per rupee normal (average for the last six years.)

Work done.

5. The out-turn of work was as tabulated below:—

Particulars.	(I) Earth-work ordinary.*	(II) Metal-breaking.	Remarks.
1. Per day-unit:	Cft.	Cft.	* Cutting or bank in ordinary black or brown soil, lead 50 ft. and lift 5 ft equivalent to a "reduced lead" of 146 ft. by Mr. Higham's and 186 ft. by C. P. standard.
Maximum ...	11	4·0	
Minimum ...	5	0·8	
Average ...	9	1·4	
2. Per worker: (average) ...	11	1·7	
3. Per digger or male-unit: (average) ...	44	...	
4. Per carrier or female and child unit: (average) ...	15	...	

Average quantity of earth-work and number of day-units per mile on new roads.

The average quantity of earth-work per mile on the Narsinghpur-Sankal Road was 520,000 cft., which afforded work for 52,000 day-units in all per mile.

Ratio of famine to ordinary rates of work.

6. The ratio of famine to ordinary rates of work is shown below :—

	Maximum.	Minimum.	Average.
Including gratuitous relief	5·1	1·8	2·8
Excluding do. ...	4·8	1·8	2·6

Permanence and utility of works.

7. All the works carried out in this district are stated by the Commissioner, Nerbudda Division,* to be of undoubted public utility, and were in the "District Road Scheme" as part of the programme of necessary or desirable public works. They are likely to continue in existence as long as funds can be provided for their ordinary maintenance ; the only work of a doubtful character in this respect being the "raising and metalling of the old Bombay Road," which forms part of a long highway the metalling of which throughout would be beyond the means of the District Fund Committee and hardly justifiable as a Provincial work, though parts of it form valuable Railway feeders.

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* *Vide* Commissioner's remarks received with Executive Engineer's No. 1870, dated 16th November 1897. (Copy annexed)

Commissioner, Nerbudda Civil Division's opinion on the permanence and utility of Famine Relief Works undertaken in the Narsinghpur District.—(Received with Executive Engineer's No. 1870, dated 16th November 1897.)

Name of work.	Commissioner's opinion as to public utility and permanent character of work.	Executive Engineer's opinion.
(1) Collection of metal for renewals and repairs on Saugor-Kareli Road. (2) Constructing Gadarwara-Sainkhera Road, 13 miles. (3) Constructing Narsinghpur-Sankal Road, 15 miles. (4) Metalling Narsinghpur-Lakhnadon Road, 26 miles. (5) Raising to Class I Barman-Tendukhera Road, 15 miles. (6) Raising to Class I Gadarwara Railway Station Road. (7) Constructing Babai-Barha Road, 7 miles. (8) Raising and metalling old Bombay Road, 63 miles. (9) Constructing 1st Section of Narsinghpur-Chhindwara Road. Narsinghpur-Chhindwara Road, Singpur to Kodari, 12 miles.	All the works in this statement are of undoubted public utility. They were carefully selected on account of their utility and were in the *District Road Scheme* as part of the programme of necessary or desirable public works. As to their permanent character, they are likely to continue in existence as long as funds can be provided for the necessary periodical repairs with the exception that No. (1) is in itself a provision for repairing a permanent public highway, and that in No. (8) the coating of metal given will probably not be renewed as the work forms part of a long highway, the metalling of which throughout would be more than the District Fund could afford. For the other works it should be possible to make due provision so as to ensure their permanent maintenance.	The Commissioner's remarks are quite complete on the subject, and I have nothing to add to them. All the works are of public utility and permanent character provided funds can be procured for their necessary maintenance.

Abstract statement of Value

Sub-Division and name of Sub-Divisional Officer.	No. of Charge.	Name and class of work, and dates commenced and closed.	Value of work done at normal P. W. D. rates.	TOTAL EXPENDITURE AND NO. OF UNITS RELIEVED.			PERCENTAGE OF GRATUITOUS RELIEF AND SPECIAL ESTABLISHMENT, &c., OVER TOTAL EXPENDITURE.	
				Total expenditure including gratuitous relief.	Total expenditure excluding gratuitous relief.	Total number of relief workers.	Gratuitous relief.	Special establishment, tools, hutting, &c.
1	2	3	4	5	6	7	8	9
			Rs.	Rs.	Rs.	No.	Percentage.	Percentage.
Narsinghpur. Mr. Bishan Swarup, Assistant Engineer.	1	Gadarwara-Sainkhera Road and Gadarwara Railway Station. **N. R. 19 miles.** From 11th January 1897 To 17th October 1897.	47,182	1,02,758	98,036	939,344	5	25
	2	Narsinghpur-Sankal Road ... **N. R. 15 miles.** From 6th January 1897 To 20th June 1897.	38,392	95,689	91,325	888,755	5	23
	3	Narsinghpur-Lakhnadon Road ... **R. C. 9 miles.** From 13th January 1897 To 9th October 1897.	37,567	77,771	69,585	6,84,243	11	2[illegible]
	4	Barmhan-Tendukhera Road ... **R. C. 15 miles.** From 15th January 1897 To 1st October 1897.	82,759	2,37,980	223,275	2,085,433	6	
	5	Saugor-Kareli Road ... **R. P. 22 ¼ miles.** From 12th January 1897 To 10th April 1897.	8,466	15,293	15,091	215,775	1	20
	6	Narsinghpur-Kareli Section of old Bombay Road. **R. C. 8 miles.** From 4th April 1897 To 15th October 1897.	11,245	41,047	38,877	309,239	5	26

DISTRICT.

of Work done by Famine Labour.

Ratio of Famine to ordinary rates.		Work done and expenditure incurred per unit relieved.			Duration of work.	Remarks.
Including gratuitous relief.	Excluding gratuitous relief.	Number of units relieved per rupee.	Work done per unit relieved per diem.			N. R.....New road. R. C.....Raised in class. R. P.....Repairs. S. T.....Test work. P. W.....Piece-work. T. W.....Task work. N. B.—"Earthwork, ordinary" denotes earthwork in banks or cuttings or earthen sides of roads in black or brown soil: average lead and vertical lift being 50 ft. and 5 ft., respectively.
			Earthwork ordinary.	Metal breaking.		
10	11	12	13	14	15	16
Ratio.	Ratio.	No.	Cft.	Cft.	Months.	
2·2	2·1	9	11	1	9	**T. W.** from 11th January 1897 to 31st August 1897. **P. W. & T. W.** from 1st September 1897 to 17th October 1897. The numbers on this work ranged from 5,000 to 9,000. There was a severe outbreak of cholera in May which largely interfered with the work. The Camp had to be removed from Jhikoli to Gadarwara. On the introduction of **P. W.** there was a gradual reduction in numbers. Condition of the workers good.
2·5	2·4	9	10	...	5	**T. W.** from 6th January 1897 to 20th June 1897. **P. W.** never started. Cholera broke out about the middle of April on this Charge and interfered with the works to some extent.
2·0	1·9	9	10	1		**T. W.** from 13th January 1897 to 23rd June 1897. **P. W. & T. W.** from 24th June to 29th October 1897. There was an outbreak of cholera at the close of April which greatly retarded the progress of work. On the introduction of **P. W.** a gradual rise in numbers took place. When the "August" rules came into force the numbers began to go down as the people at that time were able to get work in the fields. The condition of the workers was good.
2·9	2·7	9	9	0·8	9	**T. W.** from 15th January 1897 to 23rd June 1897. **P. W. & T. W.** from 20th June 1897 to 21st October 1897. There were very large numbers on this work, generally between 10,000 and 18,000, and it was most difficult to find suitable work for such numbers. From the 1st to about the 20th April there was a virulent outbreak of cholera on this work which greatly interfered with its progress. The work was closed on 21st October 1897. (For remarks on piece-work *vide* Charge No. 3.)
1·8	1·8	14	9	0·8	3	**T. W.** from 12th January 1897 to 10th April 1897. **P. W.** never started. There was an outbreak of cholera on this Charge about the close of the work.
3·7	3·5	8	9	1·0	6	**T. W.** From 4th April 1897 to 15th October 1897. **P. W.** never started. Cholera broke out on this Charge about the commencement of the work in April. This interfered a good deal with the progress of the work.

Abstract statement of Value

Sub-Division and name of Sub-Divisional Officer.	No. of Charge.	Name and class of work, and dates commenced and closed.	Value of work done at normal P. W. D. rates.	TOTAL EXPENDITURE AND No. OF UNITS RELIEVED.			PERCENTAGE OF GRATUITOUS RELIEF AND SPECIAL ESTABLISHMENT, &C., OVER TOTAL EXPENDITURE.	
				Total expenditure including gratuitous relief.	Total expenditure excluding gratuitous relief.	Total number of relief-workers.	Gratuitous relief.	Special establishment, tools, hutting, &c.
1	2	3	4	5	6	7	8	9
			Rs.	Rs.	Rs.	No.	Percentage.	Percentage.
Mr. BISHAN SWARUP, Assistant Engineer.	7	Narsinghpur-Gotegaon Section of old Bombay Road. ... **R. C. (Metal collection only.)** From 6th May 1897 To 3rd October 1897.	23,121	49,024	44,133	276,017	10	22
	9	Babai-Barha Road ... **N. R. 1 mile.** From 12th May 1897 To 10th October 1897.	29,506	72,625	67,939	564,592	6	35
	10	Kareli-Panari Section of old Bombay Road. ... **R. C. 5 ½ miles.** From 28th April 1897 To 20th June 1897.	9,079	46,493	44,157	281,988	5	28
		Total ...	2,78,317	7,38,680	6,92,418	6,245,386	6	27
Narsinghpur-Chhindwara Road. LALLA HARCHARAN DASS, Supervisor.	8	Narsinghpur-Chhindwara Road, 1st Section. **N. R. 11 miles.** From 8th April 1897 To 30th November 1897.	23,564	95,544	92,872	864,626	3	22
		Total ...	23,564	95,544	92,872	864,626	3	22
		Total and Averages for the Narsinghpur District.	3,01,881	8,34,224	7,85,290	7,110,012	6	27

DISTRICT.

of Work done by Famine Labour.

Ratio of Famine to ordinary rates.		Work done and expenditure incurred per unit relieved.			Duration of work.	Remarks.
Including gratuitous relief.	Excluding gratuitous relief.	Number of units relieved per rupee.	Work done per unit relieved per diem.			N. R.....New road. R. C.....Raised in class. R. P.....Repairs. S. T.....Test work. P. W.....Piece-work. T. W.....Task work. N. B.—"Earthwork, ordinary" denotes earthwork in banks or cuttings or earthen sides of roads in black or brown soil; average lead and vertical lift being 50 ft. and 5 ft., respectively.
			Earthwork ordinary.	Metal breaking.		
10	11	12	13	14	15	16
Ratio.	Ratio.	No.	Cft.	Cft.	Months.	
2·1	1·9	6	...	4·0	5	**T. W.** from 6th May 1897 to 30th June 1897. **P. W.** and **T. W.** from 1st July 1897 to 3rd October 1897. **P. W.** system was introduced on this work very early, and the general management was very good on account of which the work has been carried out so economically. (For remarks on piece-work, *vide* Charge No. 3)
3·5	3·3	8	8	1·4	5	**T. W.** from 12th May 1897 to 24th June 1897. **P. W.** and **T. W.** from 25th June 1897 to 10th October 1897. The main portion of this work was done during the rains when sufficient progress could not be made on account of heavy showers every now and then. (For remarks on piece-work, *vide* Charge No. 3).
5·1	4·8	6	8	10	2	**T. W.** from 28th April 1897 to 20th June 1897. **P. W.** never started. There was a virulent outbreak of cholera on this Charge just after the work was started, the Officer-in-charge having himself been attacked. This interfered a good deal with the progress of the work and raised the rates so high. The hutting, &c., could not be fully utilized as the Charge lasted only for a short time.
2·7	2·5	8	9	1·4	6	
4·0	3·9	9	5	...	6	**T. W.** from 8th April 1897 to 18th September 1897. **P. W.** and **T. W.** from 31st August 1897 to 30th November 1897. The neighbourhood of this work was extremely unhealthy, and subordinates were generaly confined to bed and frequent changes had to be made in the establishment, which interfered a good deal with the progress of the work. The introduction of **P. W.** produced no effect on the numbers till the end of September, when the robust persons began to leave. The condition of the workers was very good throughout.
4·0	3·9	9	5	...	6	
2·8	2·6	9	9	1·4	6	

CHHINDWARA DISTRICT.

Relief operations from December 1896 to November 1897.

Brief account of famine relief operations.

1. Famine relief operations were started in December 1896 and closed in November 1897. There were in all 6 Charges, approximately 17 miles apart, of which 3 were managed by the Hoshangabad P. W. Division, and 3 by the Narsinghpur Division. The road-work put in hand by famine labour was as follows:—

	Miles.
Narsinghpur Division ...	26
Hoshangabad „ ...	21
Total ...	47

The average daily attendance on each Charge was 2,400, the total number of day-units relieved from commencement to close of operations being nearly 3¼ millions. The total expenditure on all Charges amounted to upwards of 4 lakhs of rupees of which nearly 2¼ lakhs was incurred by the Narsinghpur Division, and over 1¾ lakhs by the Hoshangabad Division. A little over half the total area of the district was affected, and nearly 1 out of every 11 of the population residing within the distressed area attended the relief-works. The following are the main particulars connected with the relief operations:—

Particulars.	Chhindwara District. (6 Charges)	Average per Charge.	Remarks.
Total area	4,630	772 sq. miles.	Over half the area was affected.
Affected area served	2,549	425 „	
Total population	407	68 thousands.	
Affected population served ...	164	28 „	
Average daily attendance ...	14	2·4 „	
Total number of day-units relieved ...	3·24	0·54 millions.	
	Rs.	Rs.	
Total expenditure	4·03	0·67 lakhs.	
	Cft.	Cft.	
Total Earthwork executed ...	75·5	12·6 „	
„ Metal collection	7·8	1·3 „	
„ *Muram* „	17·5	2·9 „	
„ Consolidation	22·0	3·7 „	
	No.	No.	
„ Length of road-work ...	47·0	7·8 miles.	

Condition of relief-workers, management, &c.

2. The prices of grain ruled very high and water at places was bad. Cholera broke out at Kanchari and Delakhari in the hot weather, and there was much fever during the rains. The death-rate per mille during famine was 49·1 for the whole district against 31·5 in normal years. The supervision was generally good; that of Mr. Banerjee on the Narsinghpur-Chhindwara Road especially so. There were in the 4th section, where camps were at a long distance from head-quarters, exceptional difficulties in the first instance, and one or two of the Officers-in-charge had to be removed for incompetence and neglect of duty. The work on the ghât section was also exceptional, involving occasional rock cutting, but the whole was eventually brought into shape and the management reflects credit on Mr. Banerjee. There were also considerable difficulties in the case of the Matkuli-Belgaon section of the Chhindwara-Matkuli Road. The tract was particularly unhealthy, and not only did the workers frequently leave as soon as the gangs were made up, but the staff suffered considerably. The workers on metal consolidation had moreover to be spread out over a long length of road during the rains. Mr. Supervisor Mitra overcame these difficulties successfully.

System of work.

3. The works in the Narsinghpur Division were are all carried out on the task-work system; those in charge of the Hoshangabad Division were executed partly on the task-work system and partly by piece-work. The results as regards rates are as follows:—

System of work.	No. of Charges.	Ratio of Famine to ordinary rates of work exclusive of gratuitous relief.
Purely task-work	3	2·6
Task-work and piece-work	3	1·7
Total ...	6	2·0

Expenditure.

4. The total expenditure incurred and number of day-units relieved were as given below:—

Particulars.	Expenditure.	Day-units relieved.
	Rs.	No.
Portion in Narsinghpur P. W. Division ...	2,23,044	2,141,972
Do. Hoshangabad P. W. Division ...	1,79,568	1,093,278
Total Chhindwara District ...	4,02,612	3,235,250

Percentage of wages, gratuitous relief and miscellaneous charges.

The percentage of total outlay is made up thus:—

Wages	70
Gratuitous relief	3
Miscellaneous	27
	100

Expenditure per day unit inclusive of all charges.

The expenditure per day-unit inclusive of all charges was :—

Maximum	...	32 pies (or 6 per rupee),
Minimum	...	19 „ („ 10 „ „)
Average	...	24 „ („ 8 „ „)

Expenditure per day-unit exclusive of miscellaneous charges.

The average expenditure per day-unit exclusive of miscellaneous charges was 18 pies against 24 pies inclusive of all charges.

Average wages earned.

The wages earned averaged as follows:—

Per worker	...	20 pies
„ dependant	...	5 „

Average price of food-grains.

the average price of food-grains being 7 seers per rupee against 15 seers normal.

Work done.

5. The out-turn of work by famine labour is tabulated below:—

Particulars.	(I) Earth work ordinary.°	(II) Metal breaking.	Remarks.
1. Per day-unit :	Cft.	Cft.	
Maximum	26	2	° Cutting or bank in ordinary black or brown soil, lead 50 ft, lift 5 ft, equivalent to a "reduced lead" of 146 ft. by Mr. Higham's and 186 ft. by C. P. Standard.
Minimum	7	2	
Average	14	2	
2. Per worker: (average) ...	17	2·4	
3. Per digger or male unit: (average).	68	...	
4. Per carrier or female and child-unit: (average) ...	23	...	

Ratio of famine to ordinary rates of work.

6. The ratios of famine to ordinary rates of work were as under:—

	Maximum.	Minimum.	Average.
Including gratuitous relief ...	2·8	1·7	2·2
Excluding „ ...	2·7	1·7	2·1

7. (*a*).—NARSINGHPUR-CHHINDWARA ROAD.

Permanence and utility of works.

The Commissioner, Nerbudda Division, remarks as follows*:—

"The construction of this road is a great boon to the inhabitants of the Chhindwara District. It opens communication with the Nerbudda Valley affording an outlet for produce and an inlet for trade. It is also a famine protection work as it enables grain to be brought in from Narsinghpur. It will help to open up the Jagirs and will increase the value of land in its neighbourhood. It would be difficult to find a work of greater public utility or of more enduring benefit."

(*b*).—MATKULI-BELGAON ROAD.

The Executive Engineer (Mr. White) remarks as follows and the Commissioner concurs†:—

"All this work is of a distinctly permanent character and public utility. Nearly one-half of this important trunk road from Chhindwara to the railway was raised from a III class to a I class metalled road at a comparatively low cost ‡."

* Vide Executive Engineer's No. 1870, dated 16th November 1897 and accompaniments.
† Vide Executive Engineer's No. 7645, dated 27th November 1897 and accompaniments.
‡ Ratio of famine to ordinary rates of work 1·7.

Abstract statement of Value

Sub-Division and name of Sub-Divisional Officer.	No. of Charge.	Name and class of work, and dates commenced and closed.	Value of work done at normal P. W. D. rates.	TOTAL EXPENDITURE AND NO. OF UNITS RELIEVED.			PERCENTAGE OF GRATUITOUS RELIEF AND SPECIAL ESTABLISHMENT, &C., OVER TOTAL EXPENDITURE.	
				Total expenditure including gratuitous relief.	Total expenditure excluding gratuitous relief.	Total number of relief workers.	Gratuitous relief.	Special establishment, tools, hutting, &c.
1	2	3	4	5	6	7	8	9
			Rs.	Rs.	Rs.	No.	Percentage.	Percentage.
Narsinghpur-Chhindwara Road. LALLA HARCHARAN DASS.	8-A.	Narsinghpur-Chhindwara Road, 2nd and 3rd Sections* ... **R. C.** From 22nd May 1897 To 15th November 1897.	17,057	44,589	41,401	445,669	7	23
		Total and averages for Narsinghpur Chhindwara Road.	17,057	44,589	41,401	445,669	7	23
Chhindwara. BABU A. T. BANERJEE. (Narsinghpur Division.)	1	Narsinghpur-Chhindwara, 4th Section* ... **M. R.** From 6th January 1897 To 8th November 1897.	39,143	98,062	96,675	923,965	1	25
	2	Narsinghpur-Chhindwara Road, 5th Section* ... **M. R.** From 5th January 1897 To 8th November 1897.	28,958	80,393	79,440	772,338	1	34
		Total and averages for Chhindwara Sub-Division.	68,101	1,78,455	1,7611,5	1,696,303	1	29
Singanama-Chhindwara Road. BABU J. N. MITRA. (Hoshangabad Division.)	5A, 5B & 7	Matkuli-Belgaon Road ... **R. C. 21 miles.** From 27th December 1896 To 28th October 1897. From 1st April 1897 To 16th October 1897. From 13th July 1897 To 29th October 1897.	1,03,528	1,79,568	1,73,526	1,093,278	3	25
		Total and averages for Singanama Chhindwara Road Sub-Division.	1,03,528	1,79,568	1,73,526	1,093,278	3	25
		Total and averages for Chhindwara District.	1,88,686	4,02,612	3,91,042	3,235,250	3	27

* Charges 1, 2 and 8-A together 26 miles.

RELIEF WORKS.

DISTRICT.

of Work done by Famine Labour.

Ratio of Famine to ordinary rates.		Work done and expenditure incurred per unit relieved.			Duration of work.	Remarks.
Including gratuitous relief.	Excluding gratuitous relief.	Number of units relieved per rupee.	Work done per unit relieved per diem.			N. R.....New road. R. C.....Raised in class. R. P.....Repairs. S. T.....Test work. P. W.....Piece-work. T. W.....Task work. N. B.—"Earthwork, ordinary" denotes earthwork in banks or cuttings or earthen sides of roads in black or brown soil; average lead and vertical lift being 50 ft. and 5 ft., respectively.
			Earthwork ordinary.	Metal breaking.		
10	11	12	13	14	15	16
Ratio.	Ratio.	Ratio.	C ft.	C ft.	Months.	
2·6	2·4	10	7	...	6	**T. W.** from 22nd May 1897 to 15th November 1897. **P. W.** never started.
2·6	2·4	10	7	...	6	
2·5	2·4	9	11	...	10	**T. W.** from 6th January 1897 to 8th November 1897. **P. W.** never started. The prices of grain in this district were higher than in other districts which accounts for the somewhat high rates.
2·8	2·7	10	10	...	10	**T. W.** from 5th January 1897 to 8th November 1897. **P. W.** never started. The prices of grain in this district were generally higher than in other districts which accounts for the high rates.
2·6	2·6	10	11	...	10	
1·7	1·7	6	26	2	7	**T. W.** from 13th July 1897 to 29th October 1897. **P. W.** from 9th June 1897 to 4th September 1897. Stone for metal breaking collected and carted by contract. Metal broken soft sandstone. Proportion of non-workers to actual workers 5 per cent. Cholera at Kancharī and Delakhari in hot weather; much fever in the rains. Water bad. Camps had to be shifted. Workers were fined for short work but irregularly. Average price of grain 7 seers per rupee as compared with 15 seers in ordinary times. Difficulties in organization and management arose from the fact that during the rains the workers had to be spread over 30 miles of road for metal consolidation. Staff inadequate especially at Tamia owing to bad climate in rains and inefficient Officer-in-charge. Except the last 11 miles near Belgaon and about 3 miles on the *ghat*, the whole length of 46 miles completed as a metalled road. A very useful work. On the introduction of piece-work all the workers were kept in good condition and the weakly improved.
1·7	1·7	6	26	2	7	
2·2	2·1	8	4	2	8	

MAP
of the
NERBUDDA CIVIL DIVISION
SHOWING
FAMINE RELIEF OPERATIONS
PUBLIC WORKS DEPT.

Scale 1 Inch = 16 Miles.

RAIPUR DISTRICT.

Relief operations from December 1896 to November 1897.

Brief account of relief operations.

1. Famine relief operations were started early in December 1896 and closed by the end of November 1897. In the earlier stages of the operations there was nothing before Government to indicate the severity of the distress that subsequently occurred, and in February 1897, Colonel Temple, then Commissioner of the Chhattisgarh Division, considered that some half dozen Charges, which had been opened or arranged for, would be sufficient to meet all probable requirements. In March this demand was increased to some 11 Charges, and in April by successive stages to 15, 20, and 25. The people flocked to the works in numbers that upset all previous calculations, and at one time as many as 70,000 had to be provided with work. This resulted in some unavoidable overcrowding, and the resources of the department, already greatly strained by the calls in the Jubbulpore Division, were for a while unequal to the demand. It was only by the personal exertions of Messrs. E. Penny and Leefe that orderly arrangements became possible and a sufficient staff was got together. There were finally 20 relief Charges fully organised, approximately 14 miles apart. Several new roads were put in hand, the total length of actual construction being 120 miles. Existing roads were raised and repaired to some extent, the total length of road-work of all classes being 162 miles, excluding 7½ miles of earthwork on the Raipur-Dhamtari Tramway. The average daily attendance on each Charge was nearly 3,200, or over one-twelfth of the distressed population within the area served. The total number of day-units relieved from the commencement to the close of operations was nearly 13¼ millions, and the total expenditure over 13½ lakhs of rupees. Particulars of operations are shown below :—

Particulars.	Raipur District (20 Charges).	Average per Charge.	Remarks.
Total area	11,724	586·2 sq. miles.	Nearly one-third of the area was affected.
Affected area served	4,027	201·4 ,,	
Total population	1,584	79·2 thousands	
Affected population served ...	710	35·5 ,,	
Average daily attendance ...	63	3·15 ,,	
Total number of day-units relieved ...	13·22	0·66 millions.	
	Rs.	Rs.	
,, Expenditure	13·55	0·68 lakhs.	
	Cft.	Cft.	
,, Earthwork executed ...	305·9	15·3 ,,	
,, Metal collection	29·2	1·5 ,,	
,, *Muram* ,, ...	51·5	2·6 ,,	
,, Consolidation	33·8	1·7 ,,	
	No.	No.	
,, Length of road-work ...	169·0	8·4 miles.	

Condition of relief-workers, management, &c.

2. The proportion of feeble persons was unusually large; the number of infirms and dependants varying from 20 to 30 per cent. of the total number employed on the works. Sickness was general and cholera of a more or less virulent type, frequent in most camps during April, May and June (death-rate during famine 73·4 per mille against 30·8 normal), particularly on the Drug-Balod road, where the Executive Engineer (Mr. Leefe) fell a victim to his devotion to duty. Irregularities were discovered in certain cases and some officers-in-charge were dismissed. Gangs were occasionally fined for short work, but nothing less than the D wage was paid to any worker.

System of work.

3. All works were unavoidably at first started on the task-work system; piece-work being added subsequently in all but 3 Charges, and (under the orders of May 1897) in full force in June 1897. The system of "payment by results" was introduced on the Raipur-Dhamtari Tramway in October 1897, where it lasted for about a month and a half; and on the Dhamda-Gandai road (1st section) for a very few days only, in November 1897, just before the close of operations. Piece-work in any form was at first distasteful to the workers, but confidence became restored when the workers found that payments were

regular with the prospect of earning a larger wage. The Commissioner, Chhattisgarh Division, observed in June 1897 as follows :—

"The introduction of the piece-work system on some roads has also had the effect of preventing overcrowding of the works by able-bodied persons, not really needing relief, who flocked to the roads under the task-work system as places where they could comfortably earn the prescribed minimum wage without any undue exertion. The new system, it may be observed, has nowhere been introduced without the special precaution of having side by side with the piece-work an ample provision of task-work for weakly persons, a kitchen for those incapable of any work at all, and a hospital for the sick. The introduction of this system, with other measures adopted, has had a good effect in giving the necessary impetus to the crowds of cultivators and agricultural labourers employed on the works to be take themselves to their fields. There are signs that the system is already gaining popularity among those who really need work, and it may confidently be predicted that numbers will now steadily go up again, though of course not to the same extent as before."

As regards the "August" rules, the Commissioner remarked as follows in August 1897:—

"In the Raipur District, there has been less * scope for the introduction of the new system owing to most of the works having been already organised on a piece-work basis, under what are generally referred to as Mr. Penny's Rules". The decline in numbers was attributed by the Commissioner, "mainly to a number of persons having returned to work in their fields."

As will be seen from the detailed statements, on the introduction of piece-work the robust kept in good condition and the feeble improved. No opinion can be formed as to the effect on the out-turn of work, as accurate measurements have not been furnished of the actual quantities of work done.

Expenditure.

4. The total expenditure incurred and number of day-units relieved were Rs. 13,54,862 and 13,216,175, respectively; the percentage of total outlay being made up as follows:—

Percentage of wages, gratuitous relief and miscellaneous charges.

Wages ...	70
Gratuitous relief ...	6
Miscellaneous ...	24
	100

Expenditure per day-unit inclusive of all charges.

The expenditure per day-unit inclusive of all charges was:—

Maximum	39 pies (or 5 per rupee)
Minimum	9 „ („ 22 „)
Average	19 „ („ 10 „)

Expenditure per day-unit exclusive of miscellaneous charges.

The average expenditure per day-unit, exclusive of miscellaneous charges was 15 pies against 19 inclusive of all charges.

Average wages earned.

The average wages earned were as follows:—

Per worker	18 pies
„ dependant	6 „

Average price of food-grains.

The price of food-grains on which wages were based ranged from 7 to 9 seers per rupee against 18 seers normal.

Work done.

5. The out-turn of work is given below:—

Particulars.	(I) Earth-work, ordinary. †	(II) Metal breaking.	Remarks.
	Cft.	Cft.	†Bank or cutting in ordinary black or brown soil; lead 50 ft., lift 5 ft., equivalent to a "reduced lead" of 146 ft. by Mr. Higham's and 186 ft. by C. P. Standard.
1. Per day-unit:—			
Maximum	24	2·2	
Minimum	4	0·5	
Average	11	1·2	
2. Per worker: (average) ...	14	1·5	
3. Per digger or male-unit: (average)...	56	.....	
4. Per carrier or female and child-unit: (average)	19	.....	

*Than in the Bilaspur District.

Ratio of famine to ordinary rates of work.

6. The ratio of famine to ordinary rates of work was as follows:—

	Maximum.	Minimum.	Average.
Including gratuitous relief ...	5·0	1·8	2·6*
Excluding ,, ...	4·7	1·7	2·4

Permanence and utility of works.

7. The works carried out in this district are all useful and of a permanent character with the exception of the Laun-Katangi road, which is not likely to be completed: *vide* Commissioner, Chhattisgarh's remarks received with Executive Engineer's No. 871/63, dated 10th February 1898 (copy annexed).

*The figures are not quite reliable; the rates were probably higher.

Commissioner, Chhattisgarh Division's opinion on the permanence and utility of works undertaken in the Raipur District.—(Received with Executive Engineer, Eastern Division's No. 871/63, dated 10th February 1898.)

Serial No.	No. of Charge.	Name of Road.	Remarks by the Commissioner.
1	11 & 10	Bhatapara-Laun Road; Class II	A very important railway feeder of permanent character and distinct public utility.
2	7	Palari-Baloda Road, Class II	A useful road, being a section of the Raipur-Laun road.
3	8 & 7	Laun-Katangi Road, ...	Might be useful if there were any prospect of its being completed. Practically there is none; it must be abandoned.
4	10	Tilda-Simga Road, Class II	The road itself is a useful and permanent one; but I doubt whether there is any utility in the famine work done on it which consists of metalling.
5	1 & 1 *a*	Simga-Kawardha Road, Class II	A very important new feeder line; should be completed throughout to the Kawardha and Khairagarh borders as quickly and economically as possible.
6	2	Tilda-Sirpur Road, Class II	A road of some utility as a feeder, no more work on it appears to be necessary.
7	3 & 15	Dhamda-Deorbija-Bemetara Road, Class II ..	Do. do. do. do.
8	13	Kumhari-Patharia Road, Class II	A useful country road; should be completed on economical lines.
9	16, 4, 5, 18 & 6	Drug-Balod Road, Class II	A road of considerable utility; should be completed and maintained as far as it has gone (to Gunderdehi).
10	9 & 17	Dhamda-Gandai Road, Class II	A useful country road to connect the North-western Zamindaris with Drug and Raipur; should be completed as 3rd class.
11	19	Dongargarh-Pandaria Road, Class II ...	An important through traffic route chiefly through Native States which maintain it in a high state of efficiency. The famine work consisted of *muraming* the Raipur District section. This has long been sorely needed, and should be completed.
12	...	Raipur-Arang Road, Class II	A useful road of permanent character being the first section of the great eastern and south eastern traffic routes.

Abstract statement of Value

Sub-Division and name of Sub-Divisional Officer.	No. of Charge.	Name and class of work, and dates commenced and closed.	Value of work done at normal P. W. D. rates.	TOTAL EXPENDITURE AND NO. OF UNITS RELIEVED.			PERCENTAGE OF GRATUITOUS RELIEF AND SPECIAL ESTABLISHMENT, &c., OVER TOTAL EXPENDITURE.	
				Total expenditure including gratuitous relief.	Total expenditure excluding gratuitous relief.	Total number of relief-workers.	Gratuitous relief.	Special establishment, tools, hutting, &c.
1	2	3	4	5	6	7	8	9
			Rs.	Rs.	Rs.	No.	Percentage.	Percentage.
MR. P. C. LALL, up to 30th April 1897. LIEUT. H. N. YOUNG, from 1st May 1897 to 31st July 1897. MR. BHICAJEE BHASKER, from 1st August 1897 to 22nd November 1897.	1	1st section of Simga-Kawardha Road. **Class II N. R.** * From 11th May 1897 To 22nd November 1897.	35,532	66,551	58,842	1,484,049	12	23
Central Sub-Division LIEUT. H. N. YOUNG, up to 31st July 1897. MR. BHICAJEE BHASKER from 1st August 1897 to 25th November 1897.	A	2nd section of Simga-Kawardha Road. Bemetara-Deorbija Section. **Class II N. R.** * From 12th May 1897 To 24th November 1897.	24,374	71,194	63,316	7,64,617	11	23
	2	Tilda-Sirpur Road † and Raipur-Kharora Road. From 16th May 1897 To 25th November 1897.	31,949	1,54,888	1,49,789	11,38,543	3	25
	10	Tilda-Sirpur Road † and Tilda-Simga Road § From 1st May 1897 To 15th November 1897.	59,793	1,09,420	1,04,165	5,61,099	5	24
	13	Kumhari-Patharia Road ... **Class II N. R. 5 miles.** From 27th May 1897 To 20th November 1897.	13,722	29,992	27,578	2,32,806	8	24
MR. BHICAJEE BHASKER.	20, 21 & 22	Raipur-Dhamtari Tramway. **N. R. 7½ miles.** Raipur-Pallari Road. **R. C 18 miles.** Raipur-Arang Road. **R. P. 26 miles.** From 13th September 1897 To 25th November 1897.	22,039	49,060	48,657	2,49,599	0·6	26

* Charges 1 & 1-A together 21 miles.
† Charges 2 & 10 together N. R. 17 miles.
§ R. C. 7 miles.

DISTRICT.

of Work done by Famine Labour.

RATIO OF FAMINE TO ORDINARY RATES.		WORK DONE AND EXPENDITURE INCURRED PER UNIT RELIEVED.				REMARKS.
			WORK DONE PER UNIT RELIEVED PER DIEM.			N. R.....New road. R. C.....Raised in class. R. P.....Repairs. S. T.....Test work. P. W.....Piece-work. T. W.....Task work. N. B.—"Earthwork, ordinary" denotes earthwork in banks or cuttings or earthen sides of roads in black or brown soil; average lead and vertical lift being 50 ft. and 5 ft., respectively.
Including gratuitous relief.	Excluding gratuitous relief.	Number of units relieved per rupee.	Earthwork ordinary.	Metal breaking.	Duration of work.	
10	11	12	13	14	15	16
Ratio.	Ratio.	No.	Cft.	Cft.	Months.	
1·8	1·7	22	5	0·5	6½	**T. W.** from 11th May 1897 to 22nd November 1897. Dependants about 30 per cent. Metal broken mostly hard limestone. Infirms and dependants were paid gratuitous allowance until relief kitchen was opened in July. In May and June there was an outbreak of cholera.
2·9	2·6	17	7	0·7	6½	**T. W.** from 12th May 1897 to 24th November 1897. Infirms and dependants about 30 per cent. Relief workers were weak. This Charge was opened to relieve pressure due to large numbers in Section 1 (Charge No. 1.)
4·8	4·4	7	6	0·6	6½	**T. W.** from 16th May 1897 to 25th November 1897. **P. W.** from 22nd June 1897 to 25th November 1897. Work was mostly done by Contractors under the piece-work system. When piece-work was introduced the condition of the workers was fair. The piece-workers kept their condition and the weakly improved.
1·8	1·7	5	24	2·2	6	**T. W.** from 1st May 1897 to 15th November 1897. **P. W.** from 22nd June 1897 to 15th November 1897. Collection of boulders for metal breaking was done by ordinary contract. 1½ miles of earthwork was done on the Tilda-Sirpur Road by the Civil Department; this has not been taken into account. Infirms and dependants were about 12 to 15 per cent of the workers. When piece-work was introduced the condition of the workers was fair. The piece-workers kept their condition and the weakly improved.
2·2	2·0	8	14	1·3	5¾	**T. W.** from 27th May 1897 to 20th November 1897. **P. W.** from 22nd June 1897 to 20th November 1897. Infirms and dependants about 30 per cent. When piece-work was introduced the condition of workers was fair. The piece-workers kept their condition and the weakly improved.
2·2	2·2	5	21	1·9	2½	**T. W.** from 13th September 1897 to 25th November 1897. **P. W.** from 6th October 1897 to 25th November 1897 in Charge No. 20. Infirms and dependants about 20 per cent. 7½ miles of earthwork have been completed on the Raipur Dhamtari-Tramway for the B.-N. Railway mainly by piece-work. When piece-work was introduced the condition of the workers was fair. The weakly improved. "Payment by results" was tried on Charge No. 20 but its working did not promise well.

RAIPUR

Abstract statement of Value

Sub-Division and name of Sub-Divisional Officer.	No. of Charge.	Name and class of work, and dates commenced and closed.	Value of work done at normal P. W. D. rates.	TOTAL EXPENDITURE AND NO. OF UNITS RELIEVED.			PERCENTAGE OF GRATUITOUS RELIEF AND SPECIAL ESTABLISHMENT, &C., OVER TOTAL EXPENDITURE.	
				Total expenditure including gratuitous relief.	Total expenditure excluding gratuitous relief.	Total number of relief workers.	Gratuitous relief.	Special establishment, tools, hutting, &c.
1	2	3	4	5	6	7	8	9
			Rs.	Rs.	Rs.	No.	Percentage.	Percentage.
Central and Western Sub-Division. Lieut. H. N. YOUNG, up to 31st July 1897. MR. BHICAJEE BHASKER from 1st August 1897 to 30th November 1897. „ P. C. LALL, from 1st December 1897 to 31st December 1897.	3 & 15	Dhamda to Deokar and Deokar to Deorbija. **N. R. 15 miles.** From 16th December 1896 To 17th November 1897.	88,523	1,73,852	1,66,986	1,262,807	4	25
		Total and averages for Central Sub-Division. ...	2,75,932	6,54,957	6,19,333	5,693,520	5	24
Western Sub-Division. MR. P. C. LALL.	4, 6, 16 & 18	1st, 2nd and 3rd sections of Drug-Balod Road. **Class II N. R. 27 miles.** From 6th February 1897 To 30th November 1897.	1,49,149	4,26,410	4,01,059	4,803,540	6	24
	9	1st section of Dhamda-Gandai Road. **Class II N. R.** * From 23rd April 1897 To 20th November 1897.	12,972	65,502	60,478	740,999	8	24
	17	2nd section of Dhamda-Gandai Road. **Class II N. R.** * From 25th April 1897 To 20th November 1897.	11,206	24,173	21,623	317,331	10	23

* Charges 9 and 17 together 11 miles.

DISTRICT.

of Work done by Famine Labour.

Ratio of Famine to ordinary rates.		Work done and expenditure incurred per unit relieved.			Duration of work.	Remarks.
Including gratuitous relief.	Excluding gratuitous relief.	Number of units relieved per rupee.	Work done per unit relieved per diem.			N. R.....New road, R. C.....Raised in class. R. P.....Repairs. S. T.....Test work. P. W.....Piece-work. T. W.....Task work. N. B.—"Earthwork, ordinary" denotes earthwork in banks or cuttings or earthen sides of roads in black or brown soil; average lead and vertical lift being 50 ft. and 5 ft., respectively.
			Earthwork ordinary.	Metal breaking.		
10	11	12	13	14	15	16
Ratio.	Ratio.	No.	Cft.	Cft.	Months.	
1·9	1·9	7	16	1·5	10½	**T. W.** from 16th December 1896 to 17th November 1897. **P. W.** from 22nd June 1897 to 17th November 1897. **T. W.** from 26th June 1897 to 15th November 1897, in charge No. 15. Infirms and dependants about 20 per cent. Management good. Average condition of workers feeble. Swindling to some extent was found, and officer-in-charge dismissed on 3rd July 1897. Cholera prevailed in April and May. No fines imposed below the D wages. Maximum numbers rose to over 14,000 in April. Work on this road was split up into 2 Charges (Nos. 3 and 15). On account of large numbers in April No. 3 was made over to Central and No. 15 to Western Sub-Division. On the introduction of piece-work, the piece-workers kept their condition and the weakly improved. Workers on Charge No. 3 struck in June but gradually returned when they found that they got regular payments.
2·4	2·2	9	13	1·2	6	
2·9	2·7	11	7	0·7	9¾	**T. W.** in Charges 4, 18 and 6 from commencement to close of work. **T. W.** in Charge 16 from commencement up to 16th June 1897. **P. W.** from 16th June 1897 to 25th November 1897 in Charge No. 16, *1st section*. An outbreak of cholera from 15th April 1897 to 15th June 1897. No fine imposed below the minimum wage. Condition of relief workers weak. Proportion of dependants and infirms to actual workers 20 to 30 per cent. Management good. Hardly any section. *2nd Section*—There was much confusion in accounts swindling in this during the incumbency of Wasudeo Nand, Officer-in-charge; the large proportion of dependants and infirms (30 per cent) has been the subject of special correspondence. The condition of relief workers was generally very feeble and no penalties were enforced below the D wage. Severe outbreak of cholera from 15th April 1897 to 15th June 1897. There was swindling to some extent in May and June owing to large numbers, insufficient establishment and unsatisfactory management. *3rd Section*—Condition of relief workers fair, about 30 to 40 per cent. only being weak. No penalties imposed below the D wage. Cholera prevailed from 1st May 1897 to 15th June 1897. Swindling to some extent in June under Temporary Supervisor Dubey. On the introduction of piece-work numbers fell at first in July and part of August owing to some extent to weeding operations. Also in August they rose, but in September they fell again. The robust remained in condition and the weakly somewhat improved.
5·0	4·7	11	4	...	7	**T. W.** from 23rd April 1897 to 14th November 1897. **P. W.** from 15th November 1897 to 20th November 1897. Work commenced late in April. D wage paid during the monsoon, when it rained and no work could be done. All *muram* collection done by head loads. Condition of the workers very feeble, average proportion of dependants and workers being 30 per cent.
2·2	1·9	13	8	...	7	**T. W.** from 25th April 1897 to 11th July 1897. **P. W.** from 12th July 1897 to 20th November 1897. Condition of workers feeble. Cholera prevailed in April and May. No penalties imposed below D wage. Proportion of dependants and infirms to actual workers about 25 per cent. For remarks on piece-work *vide* Charge No. 16.

Abstract statement of Value

Sub-Division and name of Sub-Divisional Officer.	No. of Charge.	Name and class of work, and dates commenced and closed.	Value of work done at normal P. W. D. rates.	TOTAL EXPENDITURE AND NO. OF UNITS RELIEVED.			PERCENTAGE OF GRATUITOUS RELIEF AND SPECIAL ESTABLISHMENT, &C., OVER TOTAL EXPENDITURE.	
				Total expenditure including gratuitous relief.	Total expenditure excluding gratuitous relief.	Total number of relief workers.	Gratuitous relief.	Special establishment, tools, hutting, &c.
1	2	3	4	5	6	7	8	9
			Rs.	Rs.	Rs.	No.	Percentage.	Percentage.
Western Sub-Division. Mr. P. C. Lal.	19	Dongargarh-Pandaria Road. ... **R. C. 6 miles.** From 4th April 1897 To 15th November 1897.	14,423	53,214	51,215	574,763	4	25
		Total and averages for Western Sub-Division ...	1,87,750	5,69,299	5,34,375	6,436,633	6·1	24
Northern Sub-Division. Mr. Karam Chand.	7 & 11	Baloda-Palari and Bhatapara-Laun Roads. **N. R. 9 miles.** From 17th April 1897 To 15th November 1897.	35,898	81,922	77,823	638,890	5	25
	8	Laun-Katangi Road ... **N. R. 7 miles.** Bhatapara-Laun Road. **R. C. 16 miles.** From 16th May 1897 To 16th November 1897.	26,261	48,684	45,244	447,132	7	26
		Total and averages for Northern Sub-Division.	62,159	1,30,606	1,23,067	1,086,022	5·7	24
		Total and averages for Raipur District.	5,25,841	13,54,862	12,76,775	13,216,175	6	24

of Work done by Famine Labour.

RATIO OF FAMINE TO ORDINARY RAT. ..		WORK DONE AND EXPENDITURE INCURRED PER UNIT RELIEVED.			Duration of work.	REMARKS.
Including gratuitous relief.	Excluding gratuitous relief.	Number of units relieved per rupee.	WORK DONE PER UNIT RELIEVED PER DIEM. Earthwork ordinary.	Metal breaking.		N. R.....New road. R. C.....Raised in class. R. P.....Repairs. S. T.....Test work. P. W.....Piece-work. T. W.....Task work. N. B.—"Earthwork, ordinary" denotes earthwork in banks or cuttings or earthen sides of roads in black or brown soil; average lead and vertical lift being 50 ft. and 5 ft., respectively.
10	11	12	13	14	15	16
Ratio.	Ratio.	No.	Cft.	Cft.	Months.	
3·7	3·6	11	6	...	7½	**T. W.** from 4th April 1897 to 15th November 1897. Muram collection done by head-loads. Slight outbreak of cholera in April and May. Lieut. Shewell supervised this Charge. Condition of workers reported fair. Proportion of dependants and infirms to workers about 15 per cent.
3·0	2·8	11	6	0·7	8	
2·3	2·2	8	13	1·2	7	**T. W.** from 18th April 1897 to 15th November 1897. **P. W.** from 23rd June 1897 to 24th October 1897 on Charge 7. Some collection of rubble done by contract. About 4 miles of earthwork (from Pallari to Amera) were done by the Civil Department, which has not been taken into account. Condition of workers fair. Infirms and dependants about 15 per cent. of the total number. Task-workers had to be frequently fined for short work. On the introduction of piece-work the number fell at first but increased later on when people found that the petty contractors paid them properly; even the weakly applying for piece-work. The robust kept their condition and the weakly improved.
1·9	1·7	9	14	1·2	6	**T. W.** from 16th May 1897 to 16th November 1897. **P. W.** from 24th June 1897 to 24th October 1897. Metal broken hard limestone. Condition of workers fair. Infirms and dependants about 20 per cent. of the workers. Organization hasty; work had to be started simultaneously with the survey of the line. For remarks on piece-work, *vide* Charge No. 7.
2·1	2·0	8	13	1·2	6½	
2·6	2·4	10	11	1·2	7	

BILASPUR DISTRICT.

Relief Operations from January 1897 to November 1897.

Brief account of famine-relief operations.

1. Famine-relief operations were started early in January 1897, and closed by the end of November 1897. There were in all 14 relief Charges, the average distance between any two Charges being 14 miles. Labour was principally employed in raising existing roads in class (total length 97 miles). Five new roads were also constructed, aggregating 32 miles in length. The average daily attendance on each Charge was nearly 3,200, or 1 out of every 26 of the population within the area served. The total number of day-units relieved from the commencement to the close of operations was over eight millions, and the total expenditure including all charges over 9¼ lakhs of rupees. The following table exhibits the broad facts connected with the operations in the district:—

Particulars.	Bilaspur District (14 Charges).	Average per Charge.	Remarks.
Total area	8,341	595 sq. miles.	The whole area was affected.
Affected area served	8,341	595 ,,	
Total population	1,164	83·1 thousands.	
Affected population served ..	1,164	83·1 ,,	
Average daily attendance ...	45	3·2 ,,	
Total number of day-units relieved ...	8·09	0·58 millions.	
	Rs.	Rs.	
Total expenditure	9·30	0·66 lakhs.	
	Cft.	Cft.	
Total Earthwork executed ...	205·49	14·68 ,,	
,, Metal collection	25·45	1·82 ,,	
,, *Muram* ,, ...	60·95	4·35 ,,	
,, Consolidation	27·94	1·99 ,,	
	No.	No.	
,, Length of road-work	129	9·2 miles.	

Condition of relief workers; general observations as to management, &c.

2. The people who flocked to the relief-works were generally feeble, the proportion of infirms and dependants varying from 20 to 40 per cent. of the actual workers. Cholera prevailed badly in most camps in May and June, and the district death-rate ran up as high as 87·6 per mille against 27·7, average of the preceding decennial period. The growth of distress and mortality in this district has been the subject of much correspondence with the Government of India, and may be attributed to* "the progressive exhaustion of the resources of the people and largely to the cessation of labour upon earthwork, private tanks and embankments, on which, in April, over 30,000 persons, and in May, 58,942 persons were reported to have found employment in their villages. * * * In Bilaspur, as elsewhere, it has been found that the greatest difficulty in famine administration is to induce the people to seek work away from their villages." The delay in opening a sufficient number of relief-works, for which the Public Works Department was at one time taken to task, was due to several causes: but mainly to the totally unexpected calls which were suddenly sprung on the Department for the organization of relief in the adjoining district of Raipur, where the distress was believed to be far more acute, having absorbed all available staff, and to the great difficulty found in recruiting suitable men for the supervision of relief-works. By the middle of March 1897, however, there were four relief Charges open, and in April there were five. In the first week of March the numbers did not exceed 11,000, and it was only in June that they rose to 30,000. By this time 9 Charges were in full working order, and by the time the "payment-by-results" system was introduced in August, the number of Charges open had risen to 14, all of which were kept open till the close of the operations in November 1897.

* *Vide* Revenue Department No. F-1969—A., dated the 19th October 1897.

3. Works were at first started on the task-work system. Piece-work was gradually introduced between June and August 1897 on all Charges except Nos. 16 and 12, where the task system only was in force throughout. The remarks of the Commissioner, Chhattisgarh Division, regarding the effect of piece-work in preventing overcrowding of works by able-bodied persons not really in need of relief, which have been quoted in extenso in paragraph 3 of the Review on the Raipur District, apply equally to the Bilaspur District. The "payment-by-results" system of August 1897 was unsuited to the conditions of this district and was withdrawn after being only 10 days in operation. Piece-work had little or no effect on the out-turn of work, as will be seen from the following :—

System of work.

System of work.	Ratio of famine to ordinary rates of work exclusive of gratuitous relief.
Task-work ...	2·05
Task and piece-work ...	2·30

4. The total expenditure incurred and number of day-units relieved were Rs. 9,29,939 and 8,086,029, respectively; the percentage of total outlay being made up as follows :—

Expenditure.

Percentage of wages, gratuitous relief and miscellaneous charges.

Wages	73
Gratuitous relief	5
Miscellaneous	22
Total ...	100

Expenditure per day-unit, inclusive of all charges.

The expenditure per day-unit, inclusive of all charges, was :—

Maximum ...	...	28 pies (or 7 per rupee).
Minimum ...	...	14 „ (or 14 „).
Average ...	...	22 „ (or 9 „).

Average expenditure per day-unit, excluding miscellaneous, but including wages and gratuitous relief.

The average expenditure per day-unit, excluding cost of special establishment, hutting, conservancy, tools and other miscellaneous charges, was 18 pies against 22 pies, inclusive of all charges.

Average wages earned.

The average wages earned were approximately as follows :—

Per worker	...	...	19 pies.
„ dependant	...	...	7 „

Average price of food-grains.

The average price of food-grains was 9 seers per rupee against 19 seers per rupee normal.

5. Work done. The out-turn of work for the two principal items, *viz.*, (I) Earthwork, ordinary, and (II) Metal breaking, is given below :—

Particulars.	(I).—Earthwork, ordinary *	(II).—Metal breaking.	Remarks.
1. Per day-unit—	Cft.	Cft.	
Maximum	29	2·8	* Cutting or bank in ordinary black or brown soil, lead 50 feet and lift 5 feet, equivalent to a "reduced lead" of 146 feet according to Mr. Higham's and 186 feet by Central Provinces standard.
Minimum	7	0·7	
Average	12	1·1	
2. Per worker (average)	15	1·3	
3. Per digger or male-unit (average) ...	60	...	
4. Per carrier or female and child-unit (average)	20	...	

Ratio of famine to ordinary rates of work.

6. The ratio of famine to ordinary rates works out as follows :—

	Maximum.	Minimum.	Average.
Including gratuitous relief ...	4·0	1·1	2·4
Excluding „ „ ...	3·8	1·0	2·3

Permanence and utility of works.

7. The works carried out are all useful, *vide* Commissioner's opinion received with Executive Engineer's No. 871-63, dated the 10th February 1898 (copy annexed).

Commissioner, Chhattisgarh Division's opinion on the permanence and utility of works undertaken in the Bilaspur District, received with Executive Engineer, Eastern Division's No. 871—63, dated the 10th February 1898.

Serial No.	No. of Charge.	Name of Road.	Remarks by the Commissioner.
1	2 and 12	Bilaspur-Mungeli Road, Section Katta-Koni to Mungeli, Class II.	An important traffic route, connecting Bilaspur with Mungeli, Pandaria, Kawardha, Mandla and Jubbulpore ; should be completed.
2	3	Bilaspur Court-House to Railway Station Road, Class I.	A useful work ; should be completed from Local Funds.
3	9	Bilaspur-Masturi Road, Class II ...	A useful road; should be completed.
4	11	Akaltara-Pamgarh Road, Class II ...	A useful feeder ; consolidation of metal spread on it by famine labour much needed.
5	8	Akaltara-Baloda Road, Class II ...	Do. do. do.
6	15	Champa Railway Station to Village road ...	Do. do.; but Local Funds should be capable of providing for it.
7	1 and 5	Bhatapara to Mungeli Road *vid* Nandghat ...	An important road ; should be completed. Has been nominally completed as far as Nandghat, but metal very imperfectly consolidated and reconsolidation most essential.
8	4 and 13	Kota-Lormi Road ...	A useful feeder.
9	14	Bilaspur-Ratanpur Road ...	A road of some utility : was formerly in fair order, but has now been obstructed by unfinished famine work. Dressing, spreading &c. of material that has been thrown on this road is most necessary.
10	16	Katangi-Pauni Road ...	This is the same road as No. 3 of the Raipur list.

Abstract Statement of Value

Sub-Division and name of Sub-Divisional Officer.	Number of Charge.	Name and class of work, and dates commenced and closed.	Value of work done at normal P. W.D. rates.	Total expenditure and No. of units relieved.			Percentage of gratuitous relief and special establishment, &c., over total expenditure.	
				Total expenditure, including gratuitous relief.	Total expenditure, excluding gratuitous relief.	Total number of relief-workers.	Gratuitous relief.	Special establishment, tools, hutting &c.
1	2	3	4	5	6	7	8	9
			Rs.	Rs.	Rs.	No.	Percentage.	Percentage.
Northern Sub-Division. Mr. Ganga Ram.	4	1st section of Kota-Lormi road... N. R. * From 9th January 1897 To 27th November 1897.	39,127	1,42,832	1,42,342	1,123,381	0·3	23
	13	2nd section of Kota-Lormi road, 2nd charge. N. R. * From 3rd August 1897 To 27th November 1897.	17,195	36,396	36,158	254,961	0·7	23
	14	Bilaspur-Ratanpur road ... R. C. 16 miles. From 17th July 1897 To 27th November 1897.	13,123	53,153	49,980	386,393	6	2
		Totals and Averages for Northern Sub-Division.	69,445	2,32,381	2,28,480	1,764,735	2	23
Northern Sub-Division of Raipur District. Mr. Karam Chand.	16	Katangi-Pauni road, Class II ... N. R. 2 miles. From 16th August 1897 To 8th November 1897.	4,187	9,844	8,260	140,742	16	20
		Totals and Averages for Northern Sub-Division for Raipur District	4,187	9,844	8,260	140,742	16	20

* Charges Nos. 4 and 13 together 15 miles.

RELIEF WORKS.

DISTRICT.

of Work done by Famine Labour.

Ratio of Famine to ordinary rates.		Work done and expenditure incurred per unit relieved.			Duration of work.	Remarks.
			Work done per unit relieved per diem.			N. R.....New road. R. C.....Raised in class. R. P.....Repairs. S. T.....Test-work. P. W.....Piece-work T. W.....Task-work. *N. B.*—"Earthwork, ordinary" denotes earthwork in banks or cuttings or earthen sides of roads in black or brown soil; average load and vertical lift being 50 ft. and 5 ft., respectively.
Including gratuitous relief.	Excluding gratuitous relief.	Number of units relieved per rupee.	Earthwork, ordinary.	Metal breaking.		
10	11	12	13	14	15	16
Ratio.	Ratio.	No.	Cft.	Cft.	Months.	
3·7	3·6	8	8	0·8	10½	T. W. from 9th January 1897 to 27th November 1897. P. W. from 11th September 1897 to 27th November 1897. Relief-workers rather weak. Infirms about 20 per cent. of the able-bodied. The numbers went on increasing to the middle of October when they fell off. The robust remained in good condition. The weakly new arrivals were all put to task-work and did not suffer.
2·1	2·1	8	16	1·5	2¾	T. W. from 3rd August 1897 to 27th November 1897. P. W. from 4th September 1897 to 27th November 1897. Relief-workers rather weak. Infirms about 20 per cent. of the able-bodied. For remarks on piece-work, *vide* Charge No. 4.
4·0	3·8	7	8	0·8	4¼	T. W. from 17th July 1897 to 27th November 1897. P. W. from 24th July 1897 to 27th November 1897. Relief-workers rather weak. Infirms about 20 per cent. of the able-bodied. The numbers rose slowly to the middle of September and then fell steadily. The robust piece-workers remained in condition. The weakly new arrivals were put to task-work and did not suffer.
	3·3	8	11	1·0	6	
2·3	2·0	14	7	0·7	2¾	T. W. from 16th August 1897 to 8th November 1897. Metal broken hard limestone. Infirms and dependants 30 per cent. of the workers.
2·3	2·0	14	7	0·7	2¾	

Abstract Statement of Value

Sub-Division and name of Sub-Divisional Officer.	Number of Charges.	Name and class of work, and dates commenced and closed.	Value of work done at normal P. W. D. rates.	Total expenditure and No. of units relieved.			Percentage of gratuitous relief and special establishment, &c., over total expenditure.	
				Total expenditure, including gratuitous relief.	Total expenditure, excluding gratuitous relief.	Total number of relief-workers.	Gratuitous relief.	Special establishment, tools, hutting, &c.
1	2	3	4	5	6	7	8	9
			Rs.	Rs.	Rs.	No.	Percentage.	Percentage.
Western Sub-Division. Mr. B. Shaw.	1	Bhatapara-Nandghat road ... **N. R. 12 miles.** From 9th January 1897. To 30th November 1897.	88,622	1,10,887	1,05,460	1,340,290	5	22
	5	Nandghat-Mungeli road ... **R. C. 21 miles.** From 17th April 1897 To 30th November 1897.	28,731	99,034	96,224	657,762	3	22
	10	Bhatapara-Laun road .... **R. C. 7 miles.** From 22nd May 1897. To 30th November 1897	15,814	44,001	40,249	472,661	9	21
Western Sub-Division. Mr. A. R. Gadgil up to 4th April 1897, and Mr. B. Shaw, from 5th April 1897 to end of work.	12	2nd charge of Bilaspur-Mungeli road .. **R. C.*** From 2nd January 1897. To 30th November 1897.	64,055	1,37,849	1,31,891	1,352,204	4	22
		Totals and Averages for Western Sub-Division.	1,97,222	3,91,771	3,73,824	3,822,917	5	82

* *Vide* Charge No. 2.

RELIEF WORKS.

DISTRICT.

of Work done by Famine Labour.

Ratio of Famine to ordinary rates.		Work done and expenditure incurred per unit relieved.			Duration of work.	Remarks.
			Work done per unit relieved per diem.			N. R.....New road. R. C.....Raised in class. R. P.....Repairs. S. T.....Test-work. P. W.....Piece-work. T. W.....Task-work. *N. B.*—"Earthwork, ordinary" denotes earthwork in bank or cuttings or earthen sides of roads in black or brown soil; average lead and vertical lift being 50 ft. and 5 ft., respectively.
Including gratuitious relief.	Excluding gratuitous relief.	Number of units relieved per rupee.	Earthwork, ordinary.	Metal breaking.		
10	11	12	13	14	15	16
Ratio.	Ratio.	No.	Cft.	Cft.	Months.	
1·2	1·2	12	15	1·5	10¾	T. W. from 9th January 1897 to 30th November 1897. P. W. from 8th June 1897 to 30th November 1897. When piece-work was introduced the condition of the workers was good, only 30 per cent. of them were weakly. The numbers fell off. The robust remained in condition and the weakly improved.
3·4	3·4	7	10	...	7½	T. W. from 17th April 1897 to 30th November 1897. P. W. from 15th June 1897 to 30th November 1897. When piece-work was introduced the condition of the workers was good, only 30 per cent. of them were weakly. The numbers went on increasing up to the middle of September. The robust remained in condition and the weakly improved.
2·7	2·5	11	...	0·8	6¼	T. W. from 22nd May 1897 to 30th November 1897. P. W. from 7th June 1897 to 30th November 1897. Metal broken soft sandstone. Infirms 15 per cent. of the workers. For remarks on piece-work, *vide* Charge No. 1.
2·1	2·0	10	19	1	11	T. W. from 2nd January 1897 to 30th November 1897. Infirms and dependants were about 20 per cent. of the workers.
2·0	1·9	10	12	1·1	9	

FAMINE

BILASPUR

Abstract Statement of Value

Sub-Division and name of Sub-Divisional Officer.	Number of Charge.	Name and class of work, and dates commenced and closed.	Value of work done at normal P. W. D. rates.	Total expenditure and No. of units relieved.			Percentage of gratuitous relief and special establishment, &c., over total expenditure.	
				Total expenditure, including gratuitous relief.	Total expenditure, excluding gratuitous relief.	Total number of relief-workers.	Gratuitous relief.	Special establishment, tools, hutting, &c.
1	2	3	4	5	6	7	8	9
			Rs.	Rs.	Rs.	No.	Percentage.	Percentage.
Central Sub-Division. Mr. A. R. Gadgil.	2	1st charge of Bilaspur-Mungeli road. **R. C.*** From 16th May 1897. To 11th November 1897.	32,394	98,308	91,512	811,741	7	22
	3	Bilaspur Railway Station road, class I ... **N. R. 2½ miles.** From 24th March 1897. To 30th November 1897.	13,658	15,185	14,842	111,804	2	23
	8	Akaltara-Baloda road ... **R. C. 9 miles.** From 25th July 1897. To 9th November 1897.	16,265	54,281	49,255	353,689	9	21
	9	Bilaspur-Masturi Road ... **R. C. 10 miles.** From 23rd May 1897. To 13th November 1897.	23,688	68,230	63,486	575,372	7	21

* Charges Nos. 12 and 2 together 22 miles.

RELIEF WORKS.

DISTRICT.

of Work done by Famine Labour.

Ratio of Famine to ordinary rates.		WORK DONE AND EXPENDITURE INCURRED PER UNIT RELIEVED.			Duration of work.	REMARKS. N. R.....New road. R. C.....Raised in class. R. P.....Repairs. S. T.....Test-work. P. W....Piece-work. T. W....Task-work. *N. B.*—"Earthwork, ordinary" denotes earthwork in banks or cuttings or earthen sides of roads in black or brown soil; average lead and vertical lift being 50 ft. and 5 ft., respectively.
Including gratuitous relief.	Excluding gratuitous relief.	Number of units relieved per rupee.	Work done per unit relieved per diem.			
			Earthwork, ordinary.	Metal breaking.		
10	11	12	13	14	15	16
Ratio.	Ratio.	No.	Cft.	Cft.	Months.	
3·0	2·8	8	8	0·9	5¾	T. W. from 16th May 1897 to 4th November 1897. P. W. from 4th October 1897 to 11th November 1897. Condition of relief-workers generally weak. Management good. The piece-work system in this Charge had not sufficient trial. It had no prejudicial effect either on the number or the health of workers.
1·1	1·0	7	29	2·8	8¼	T. W. from 24th March 1897 to 30th November 1897. P. W. from 1st August 1897 to 30th November 1897. Condition of relief-works generally weak. Management good.
3·3	3·0	7	11	1·0	3½	T. W. from 25th July 1897 to 2nd August 1897. P. W. from 2nd August 1897 to 9th November 1897. Management good. When piece-work was introduced the condition of the workers was fair. It had no injurious effect either on the numbers or the health of workers.
2·8	2·7	8	94	0·9	5½	T. W. from 23rd May 1897 to 13th November 1897. P. W. from 16th August 1897 to 13th November 1897. Condition of relief-workers generally weak. Management good. There was no perceptible effect on numbers till the introduction of "payment-by-results" with Deputy Commissioner's consent; the numbers then fell at once.

Abstract Statement of Value

Sub-Division and name of Sub-Divisional Officer.	Number of Charge.	Name and class of work, and dates commenced and closed.	Value of work done at normal P. W. D. rates.	Total expenditure and No. of units relieved			Percentage of gratuitous relief and special establishment, &c., over total expenditure.	
				Total expenditure, including gratuitous relief.	Total expenditure, excluding gratuitous relief.	Total number of relief-workers.	Gratuitous relief.	Special establishment, tools, hutting, &c.
1	2	3	4	5	6	7	8	9
			Rs.	Rs.	Rs.	No.	Percentage.	Percentage.
Central Sub-Division, Mr. A. R. Gadgil.	11	Akaltara-Pamgarh road ... **R. C. 10 miles.** From 17th June 1897. To 6th November 1897.	21,283	35,624	29,440	334,565	17	19
	15	Champa Railway Station Road.... **N. R. 1½ miles.** From 25th July 1897. To 6th November 1897.	9,501	24,315	13,162	170,464	5	22
		Total and Averages for Central Sub-Division.	1,16,789	2,95,943	2,71,697	2,357,635	8	21
		Total and Averages for Bilaspur District.	3,87,643	9,29,939	8,82,261	8,086,029	5	22

DISTRICT.

of Work done by Famine Labour.

Ratio of Famine to ordinary rates.		Work done and expenditure incurred per unit relieved.			Duration of work.	Remarks.
			Work done per unit relieved per diem.			N. R.....New road. R. C.....Raised in class. R. P.....Repairs. S. T.....Test-work. P. W.....Piece-work. T. W.....Task-work. *N. B.*—"Earthwork, ordinary" denotes earthwork in banks or cuttings or earthen sides of roads in black or brown soil; average lead and vertical lift being 50 ft. and 5 ft., respectively.
Including gratuitous relief.	Excluding gratuitous relief.	Number of units relieved per rupee.	Earthwork, ordinary.	Metal breaking.		
10	11	12	13	14	15	16
Ratio.	Ratio.	No.	Cft.	Cft.	Months.	
1·6	1·4	10	16	1	4¼	T. W. from 17th June 1897 to 28th June 1897. P. W. from 28th June 1897 to 6th November 1897. Condition of relief-workers generally fair. Management good. On the introduction of piece-work, there was no material effect on the numbers or the condition of the workers which was fair. The robust remained so and the weakly did not improve.
2·6	2·4	7	13	1·3	3½	T. W. from 25th July 1897 to 2nd August 1897. P. W. from 2nd August 1897 to 6th November 1897. Condition of relief-workers generally fair. Management good. For remarks on piece-work, *vide* charge No. 11.
2·5	2·3	8	14·4	1·3	3	
2·4	2·3	9	12	1·1	6	

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SAMBALPUR DISTRICT.

Relief operations from April 1897 to December 1897.

1. There was only one relief Charge in this district, *viz.*, the construction of a new road from Dabhra to Kharsia (10 miles), the average daily attendance being nearly 1000.

Brief account of famine relief operations.

The following table exhibits the main facts in connection with this work :—

Particulars.	Sambalpur District (1 Charge.)	Average per Charge.	Remarks.
Total area	4,948	4,948 sq.. miles.	
Affected area	228	228 ,,	
Total population	796	796 thousands.	
Affected population served ...	62	62 ,,	
Average daily attendance ...	·85	·85 ,,	
Total number of day-units relieved ..	·17	·17 millions.	
	Rs.	Rs.	
,, Expenditure	0·2	0·2 lakhs.	
	Cft.	Cft.	
,, Earthwork executed ...	19 36	19·36 ,,	
,, Metal collection ...	.....	.....	
,, *Muram* collection ...	3 56	3·56 ,,	
,, Consolidation ...	1·11	1·11 ,,	
	No.	No.	
,, Length of road-work ...	10	10 miles.	

2. The Commissioner's remarks on the condition of workers are given below :—

Condition of relief-workers. General observations as to management, &c.

"Many of the workers on the Dabhra-Kharsia road are said to be weakly, but their condition is no index of the state of the people in the district generally, or even in that small tract of it which this work serves, and which is specially classed as distressed, since many of the workers belong to the Bilaspur District. The reason assigned for so few able-bodied persons being found on the works is, that they do not require relief."

The Deputy Commissioner, Sambalpur, reports that :—"the piece-workers on the Dabhra-Kharsia road are robust and healthy, but the task workers are weak. The general health of the district is good."

3. The work was started on the task-work system ; piece-work was introduced in July 1897. The Commissioner remarked in August as follows :—

System of work.

"Piece-workers on the Dabhra-Kharsia road are in good condition. The task-workers are reported to be slightly emaciated, but there is no specific disease among them, they having sufficient food and a good water-supply."

4. The total expenditure incurred and number of day-units relieved were Rs. 19,754 and 171,724, respectively ; the percentage of total outlay being made up as follows :—

Expenditure.

Percentage of wages, gratuitous relief and miscellaneous.

Wages ...	69
Gratuitous relief ...	5
Miscellaneous ...	26
Total ...	100

The expenditure per day-unit inclusive of all charges was :—

Expenditure per day-unit inclusive of all charges.

Maximum ...	22 pies (or 9 per rupee)
Minimum	... ...
Average ...	22 ,, (,, ,,)

Average expenditure per day-unit excluding miscellaneous but including wages and gratuitous relief.

The average expenditure per day-unit excluding cost of special establishment, hutting, conservancy, tools and other miscellaneous charges was 16 pies against 22 pies inclusive of all charges.

The average wages earned were approximately as follows :—

Average wages earned.

Per worker	...	18 pies.
„ dependant	...	7 „

Average price of food-grains.

the average price of food-grains being 9 seers per rupee against 18 seers per rupee normal.

Work done.

5. The out-turn of work is given below :—

Particulars.	(I) Earthwork ordinary.*	(II) Metal breaking.	Remarks.
1. Per day-unit—	Cft.	Cft.	
Maximum ...	16	...	* Cutting or bank in ordi[illegible]
Minimum ...	...	...	black or brown soil, lead 50 ft.
Average ...	16	...	lift 5 ft. equivalent to a "reduced lead" of 146 ft. according to Mr. Higham's and 186 ft. according to C. P. Standard.
2. Per worker (average) ...	19	...	
3 Per digger or male-unit (average) ...	76	...	
4. Per carrier or female and child-unit (average) ...	25	...	

Ratio of famine to ordinary rates of work.

6. The ratio of famine to ordinary rates works out as follows :—

	Maximum.	Minimum.	Average.
Including gratuitous relief ...	...	...	1·7
Excluding „ „ ...	...	...	1·6

Permanence and utility of works.

7. The Commissioner's remarks on the Dabhra-Kharsia road received with Executive Engineer, Eastern Division's No. 871/63, dated 10th February 1898, are as follows :—

"Will be a useful feeder when made, and should be completed when practicable. The section at the Kharsia end is in the territory of the Raja of Raigarh, who is quite ready to co-operate with Government."

Abstract statement of Value

Sub-Division and name of Sub-Divisional Officer.	No. of Charge.	Name and class of work, and dates commenced and closed.	Value of work done at normal P. W. D. rates.	TOTAL EXPENDITURE AND NO. OF UNITS RELIEVED.			PERCENTAGE OF GRATUITOUS RELIEF AND SPECIAL ESTABLISHMENT, &C., OVER TOTAL EXPENDITURE.	
				Total expenditure including gratuitous relief.	Total expenditure excluding gratuitous relief.	Total number of relief-workers.	Gratuitous relief.	Special establishment, tools, hutting, &c.
1	2	3	4	5	6	7	8	9
			Rs.	Rs.	Rs.	No.	Percentage.	Percentage.
Sambalpur Sub-Division. Sub-Conductor E. HAYDEN, up to 6th July 1897 and from 7th October 1897 to 30th November 1897. MR. N. V. KELKER, S. D. O., from 7th July 1897 to 6th October 1897.	1	Dabhra-Kharsia Road ... **N. R. 10 miles.** From 26th April 1897 To 30th November 1897.	11,816	19,754	18,770	171,724	5	26
		Total and averages for Sambalpur Division and District.	11,816	19,754	18,770	1,71,724	5	26

DISTRICT.

of Work done by Famine Labour.

Ratio of Famine to ordinary rates.		Work done and expenditure incurred per unit relieved.			Duration of work.	Remarks.
Including gratuitous relief.	Excluding gratuitous relief.	Number of units relieved per rupee.	Work done per unit relieved per diem.			N. R.....New road. R. C.....Raised in class. R. P.....Repairs. S. T.....Test work. P. W.....Piece-work. T. W.....Task-work. N. B.—"Earthwork, ordinary" denotes earthwork in banks or cuttings or earthen sides of roads in black or brown soil; average lead and vertical lift being 50 ft. and 5 ft., respectively.
			Earthwork ordinary.	Metal breaking.		
10	11	12	13	14	15	16
Ratio.	Ratio.	No.	Cft.	Cft.	Months.	
1·7	1·6	9	16	...	7	**T. W.** from 26th April 1897 to 30th November 1897, **P. W.** from 11th July 1897 to 30th November 1897. There was an outbreak of cholera amongst the work people in the month of April 1897.
1·7	1·6	9	16	...	7	

CHHATTISGARH STATES ROADS DIVISION.

Relief operations from November 1896 to November 1897.

Brief account of famine relief operations.

1. Famine relief operations were commenced in November 1896 and closed in November 1897. There were in all 9 Charges which were distributed as under :—

I.—Works within the territories of and at the cost of Feudatory States	2
II.—Works within Zamindaris	
(1).—At the cost of private Estates	2
(2).—At the cost of Government	3
(3).—Partly at the cost of private Estates and partly at the cost of Government	2
	9

Of the 9 Charges 5 consisted of road work and 4 of tank construction. Altogether 5 new roads (total length 71 miles) and 10 new tanks were constructed. The total attendance averaged upwards of 7,000 daily ; the average attendance per Charge being about 800. The total number of day-units relieved from commencement to close of operations was over 1¼ millions, and total expenditure nearly 1¾ lakhs of rupees. Particulars of work done and expenditure incurred are as follows :—

Particulars.	Chhattisgarh States. (9 Charges).	Average per Charge.	Remarks.
Average daily attendance	7·3	0·8 thousands.	
Total No. of day-units relieved	1·3	0·15 millions.	
	Rs.	Rs.	
„ Expenditure	1·73	0·19 lakhs.	
	Cft.	Cft.	
„ Earthwork carried out	144·2	16·0 „	
„ Metal collection	0·7	0·08 „	
„ *Muram* collection	11·9	1·3 „	
„ Consolidation	1·5	0·2 „	
	No.	No.	
„ Length of road-work	71·0	8·0 miles.	
No. of tanks constructed	10	.....	

Condition of relief-workers, management, &c.

2. The condition of the relief-workers was on the whole good and their management satisfactory. Rather feeble persons were employed on the Kawardha-Dasrangpur Road in the Kawardha State ; and the construction of the Raj-Nandgaon-Antagarh Road was largely interfered with by outbreaks of cholera, which caused a falling off in numbers from time to time, the full strength of the establishment being nevertheless kept up throughout in order to meet increasing demands as the people gradually returned to work again.

System of work.

3. Of the 9 Charges, three were conducted on the task-work system only, and two on the piece-work system only. On one Charge the task and piece-work systems were conjointly in force throughout, and the remaining three were at first started on task-work and, about the middle of June 1897, piece-work was added. This was at first distasteful to the robust workers, but they were gradually reconciled to the system, and those who had left the works at first returned to them again. The

robust remained in good condition, and the weakly improved in health steadily. The piece-work system had, moreover, showed a marked effect on the out-turn of work as will be seen from the following results :—

System of work.	Ratio of famine to ordinary rates of work exclusive of gratuitous relief.	Remarks.
Purely task-work	2·0	*This does not take into account the work where rates were abnormally high on account of outbreaks of cholera.
Task-work and piece-work ...	1·8*	
Purely piece-work	0·9	

Expenditure.

4. The total expenditure incurred and number of day-units relieved were as detailed below :—

Particulars.	Expenditure.	Day-units relieved.
	Rs.	No.
I. Feudatory States—	8,913	91,841
II. Zamindaris.—		
(1). At cost of private Estates	6,415	62,265
(2). „ „ Government	84,854	589,453
(3). Partly at cost of Estates and partly at cost of Government	73,275	564,772
Total ...	1,73,457	1,308,331

The percentage of total outlay was made up as follows :—

Percentage of wages, gratuitous relief and miscellaneous charges.

Wages	...	73
Gratuitous relief	...	6
Miscellaneous	...	21
		100

Expenditure per day-unit inclusive of all charges.

The expenditure incurred per day-unit, inclusive of all charges, was :—

Maximum	... ...	64 pies (or 3 per rupee)
Minimum	... ...	15 „ („ 13 „ „)
Average	.. ...	24 „ („ 8 „ „)

Expenditure per day-unit exclusive of establishment, hutting and other miscellaneous charges.

The average expenditure per day-unit excluding cost of special establishment, hutting, tools and other miscellaneous charges was 19 pies against 24 inclusive of all charges.

Average wages earned.

The average wages earned were approximately as follows :—

Per worker	... ...	22 pies
„ dependant	... ...	9 „

Average price of food-grains.

The price of food-grains was from 7 to 9 seers per rupee against 18 normal.

Work done.

5. The out-turn of work is exhibited in the following table :—

Particulars.	(I) Earth work ordinary.*	(II) Metal-breaking.	Remarks.
	Cft.	Cft.	*Cutting or bank in ordinary brown or black soil, lead 50 feet, lift 5 feet, equivalent to a "reduced lead" of 146 feet according to Mr. Higham's and of 186 feet according to C. P. standard.
1. Per day-unit:—			
Maximum ...	45	2	
Minimum ...	9	2	
Average ...	23	2	
2. Per worker: (average) ...	27	2·4	
3. Per digger or male-unit: (average)	108		
4. Per carrier or female and child-unit: (average) ...	36		

Ratio of famine to ordinary rates of work.

6. The ratio of famine to ordinary rates of work are as given below :—

	Maximum.	Minimum.	Average.
Including gratuitous relief ...	3·20	0·85	2·1
Excluding „ „ ...	3·06	0·85	2·0

Permanence and utility of works.

7. The works carried out are all useful and of a permanent character, as will be evident from paragraphs 5 to 8 of the Commissioner's letter No. 10941, dated 8th December 1897, herewith annexed. The roads undertaken were all needed to open up the country and their construction had been decided on prior to the approach of famine. Funds will, it is believed, be forthcoming in due course for the completion of such works within the Zamindaris * as have been left in a more or less unfinished state. The tanks have all been constructed on sites selected with the view of irrigating considerable areas of land and thereby either improving existing cultivation or adding to it.

* *Vide* Executive Engineer's No. 5643/34, dated the 16th December 1897.

Commissioner of Chhattisgarh's opinion on the permanence and utility of works in the Chhattisgarh States Road Division. Extract copy of Commissioner's No. 10941, dated the 8th December 1897.

* * * *

5. The first of these works, the British Section of the Raj-Nandgaon-Antagarh Road, is undoubtedly one of the greatest permanent utility. Its construction has, quite apart from any question of famine relief, for some years past been consistently pressed on the Administration on both economic and political considerations as being required to link up the two ends which have already been constructed by Native States of an important railway feeder. Of all the famine relief-works that have been undertaken in Chhattisgarh, I regard the speedy completion of this as the most important.

6. The other two road-works are also of permanent utility, but their utility will be primarily to the Zamindari Estates, in which they are situated and at whose expense it was originally contemplated that they should be constructed. Apart from the relief which the expenditure incurred on them has afforded, there are other objects on which Government funds might more profitably be spent. It has been arranged that these works shall be completed at the cost of the Estates, and no further outlay on them on the part of Government is necessary.

7. Turning now to classes I and II (*a*), the work executed is in all cases of permanent utility to the provider of the funds. The tank works included in the list are of course of purely local utility. But the road-works in the Nandgaon and Kawardha States are sections of important railway feeders, which open up British, as well as State territories. From the persistence with which the construction of the Raj-Nandgaon-Chauki Road has been urged by the Commissioner of Nagpur and the Deputy Commissioner of Chanda, it may be taken that this is a work of the highest importance to the Chanda District, as well as being of decided advantage to the Nandgaon State. The Kawardha-Dasrangpur Road forms the Kawardha State Section of the Tilda-Kawardha Feeder Road. This section is now complete, and the completion of the British Sections in the Raipur and Bilaspur Districts is now a matter of pressing importance.

8. You have apparently omitted to mention the improvement of the Kawardha Section of the Mandla-Bilaspur Road. The permanent utility of this must depend largely on the steps which Government may be able to take towards improving the remainder of this road. In itself, and so far as the interests of the Kawardha State are concerned, its utility is not of a specially marked character.

Abstract statement of Value

Sub-Division and name of Sub-Divisional Officer.	No. of Charge.	Name and class of work, and dates commenced and closed.	Value of work done at normal P. W. D. rates.	Total expenditure and No. of units relieved.			Percentage of gratuitous relief and special establishment, &c., over total expenditure.	
				Total expenditure including gratuitous relief.	Total expenditure excluding gratuitous relief.	Total number of relief-workers.	Gratuitous relief.	Special establishment, tools, hutting, &c.
1	2	3	4	5	6	7	8	9
			Rs.	Rs.	Rs.	No.	Percentage.	Percentage.
		I.—Works executed within the territories and at the cost of Feudatory States.						
Kawardha. Mr. Ram Krishna Misr.		Kawardha-Dasrangpur Road in Kawardha State. **N. R. 13 miles.** From 23rd April 1897 To 13th November 1897.	2,495	7,589	6,754	75,216	10	8
		3 Tanks in Kawardha State ... From 23rd April 1897 To 2nd October 1897.	1,562	1,324	1,324	16,625	...	14
		Total and averages ...	4,057	8,913	8,078	91,841	9	9
		II.—Works executed within Zamindaries. *A.—At the cost of Private Estates.*						
Tipan Tank. Mr. A. M. Subbaya Moodliar.		Bund across the Tipan Nalla for a tank in the Pendra Zamindari From 6th March 1897 To 15th May 1897.	1,694	3,645	3,448	34,664	5	7
Pandaria. Mr. Mohammad Ismail.		5 Tanks in the Pandaria Zamindari From 8th May 1897 To 24th July 1897.	3,264	2,770	2,770	27,601	...	7
		Total and averages ...	4,958	6,415	6,218	62,265	3	7

ROADS DIVISION.

RELIEF WORKS.

BILASPUR DISTRICTS.

of Work done by Famine Labour.

Ratio of Famine to ordinary rates.		Work done and expenditure incurred per unit relieved.			Duration of work.	Remarks.
			Work done per unit relieved per diem.			N. R.....New road. R. C.....Raised in class. R. P.....Repairs. S. T.....Test work. P. W.....Piece-work. T. W.....Task work. N. B.—"Earthwork, ordinary" denotes earthwork in banks or cuttings or earthen sides of roads in black or brown soil; average lead and vertical lift being 50 ft. and 5 ft., respectively.
Including gratuitous relief.	Excluding gratuitous relief.	Number of units relieved per rupee.	Earthwork ordinary.	Metal breaking.		
10	11	12	13	14	15	16
Ratio.	Ratio.	No.	Cft.	Cft.	Months.	
3·02	2·71	10	9	...	7	**T. W.** from commencement. **P. W.** nil. Work closed in November 1897. The entire expenditure on this work has been met from Kawardha State Funds. The earth work rate here is high, because only very feeble people were employed on it and the earthen sides to *muram* needed a great deal of dressing. Moreover the work was practically all done in the rains.
·85	·85	13	31	...	6	**T. W.** nil. **P. W.** from commencement. Work closed on 2nd October 1897. These 3 tanks were constructed entirely on the piece-work system with practically no establishment; the rate for work done is therefore very low. Only one Timekeeper was employed to supervise the work and make payments. Funds for these tanks were obtained from the Kawardha State Funds.
2·2	2·0	10	20	...	6½	
2·15	2·04	9	10	...	2	**T. W.** from commencement. **P. W.** nil. Work closed on 15th May 1897. The rate in this case seems high, but it is really very favourable, for the average lead was about 150 feet, and the average lift over 10 feet.
·88	·88	10	45	...	3	**T. W.** nil. **P. W.** from commencement. Work closed on 24th July 1897. These tanks were all constructed on piece-work system with practically no staff. Only one Timekeeper was kept to measure up work and make payments. This accounts for the low rates.
1·3	1·2	10	28	...	2½	

Sub-Division and name of Sub-Divisional Officer.	No. of Charge.	Name and class of work, and dates commenced and closed.	Value of work done at normal P. W. D. rates.	Total expenditure and No. of units relieved.			Percentage of gratuitous relief and special establishment, &c., over total expenditure.	
				Total expenditure including gratuitous relief.	Total expenditure exclusive gratuitous relief.	Total number of relief workers.	Gratuitous relief.	Special establishment, tools, hutting, &c.
1	2	3	4	5	6	7	8	9
		B.—Partly at the cost of private Estates and partly at the cost of Government.	Rs.	Rs.	Rs.	No.	Percentage.	Percentage.
Raj-Nandgaon-Chauki Road. Mr. P. Dass.	7	Chauki-Gupsal Road from Chauki to Gupsal on the Raj-Nandgaon border in the Chauki Zamindari of the Chanda District, and Raj-nandgaon-Chauki Road from Dongargaon to Gupsal in Raj-Nandgaon and Chauki States. **N. R. 6 miles.** From 1st January 1897 To 29th May 1897.	15,770	27,042	25,855	200,585	4	15
Pandaria. Mr. Mohammed Ismail.	3	Pandaria-Lurmi Road in the Pandaria Zamindari. **N. R. 16 miles.** From 4th November 1896 To 20th November 1897.	21,187	46,233	42,925	364,187	7	17
		Total and averages ...	36,957	73,275	68,780	564,772	6	16
Raj-Nandgaon Antagarh Road. Lieut. R. B. B. Howe, I. S. C.	7	*C.—At cost of Government.* Raj-Nandgaon-Antagarh Road from Rani Tarai to Lohara in the Raipur District. **N. R. 10 miles.** From 25th April 1897 To 20th November 1897.	14,227	45,611	43,527	353,938	5	22
Raj-Nandgaon Chauki Road. Mr. P. Dass.		A tank at Chauki in the Chauki Zamindari of the Chanda District. From 1st January 1897 To 29th May 1897.	3,168	4,637	4,518	14,567	3	10
Pendra-Parasi Road. Mr. A. H. Gordon.	1	Pendra-Parasi Road in the Pendra Zamindari. **N. R. 26 miles.** From 20th March 1897 To 16th October 1897.	19,240	34,606	32,354	220,948	7	30
		Total and averages ...	36,635	84,854	80,399	589,453	5	28
		Total and averages for the whole Chhattisgarh States Roads Division.	82,607	1,73,457	1,63,475	1,308,331	6	21

ROADS DIVISION.

RELIEF WORKS.

BILASPUR DISTRICTS.

of Work done by Famine Labour.

Ratio of Famine to ordinary rates.		Work done and expenditure incurred per unit relieved.			Duration of work.	Remarks.
Including gratuitous relief.	Excluding gratuitous relief.	Number of units relieved per rupee.	Work done per unit relieved per diem. Earthwork ordinary.	Work done per unit relieved per diem. Metal breaking.		N. R.....New road. R. C.....Raised in class. R. P.....Repairs. S. T.....Test work. P. W.....Piece-work. T. W.....Task work. N. B.—"Earthwork, ordinary" denotes earthwork in banks or cuttings or earthen sides of roads in black or brown soil; average lead and vertical lift being 50 ft. and 5 ft., respectively.
10	11	12	13	14	15	16
Rato.	Ratio.	No.	Cft.	Cft.	Months.	
1·71	1·64	7	21	...	7	**T. W.** and **P. W.** from commencement. Work closed on 29th May 1897. For this work the Raj-Nandgaon State contributed Rs. 15,000 and Ambagarh-Chauki Rs. 7,500, and Famine grant to the extent of Rs. 7,500 was given. These rates are favourable because a great deal of work was done on the piece-work system, in the Nandgaon State, at the beginning and end of the work with very little establishment. Also because of the constant presence of Mr. P. Dass, Sub-Divisional Officer, in the camp, and the supervision of a reliable Officer-in-charge.
2·18	2·03	8	16	2	12	**T. W.** from commencement. **P. W. & T. W.** from 26th June 1897 to 20th November 1897. Work closed on 20th November 1897. Out of the total expenditure on this work of Rs. 46,233, the Pandaria Zamindari provided Rs. 13,526 and the balance, *viz.*, Rs. 32,707 was spent out of the Famine grant of Rs. 36,000 given by the Local Administration. When **P. W.** was introduced the number gradually increased till 7th August 1897, and then fell owing to field works; on 21st August 1897 they rose again and then began to fall. The robust persons were kept in condition and weaklings improved.
2·0	1·9	8	19	2	9	
3·20	3·06	8	10	...	7	**T. W.** from commencement. **P. W. & T. W.** from 18th June 1897 to 20th November 1897. Work closed on 20th November 1897. The grant for this work has been entirely met from the Famine Funds. The rates on this road are I consider higher than they should be. This is due to outbreaks of cholera reducing the numbers temporarily from time to time, while the establishment had to be maintained to meet demands when the people returned. On the introduction of the **P. W.** the number fell for the first week and then began to rise to more than what it was before the introduction of the system. The robust remained in condition and the weakly ones improved.
1·46	1·45	3	43	...	2½	**T. W.** from commencement. **P. W.** nil. Work closed on 29th May 1897. Funds were obtained for this work from the grant of Rs. 15,000 from the Ambagarh-Chauki Estate and Famine Fund. Considering the lift and lead, this rate is very favourable. I attribute this to Mr. Russell's (Assistant Commissioner) presence at Chauki. He was there nearly the whole time the work was in progress.
1·80	1·68	7	25	...	8	**T. W.** from commencement. **P. W. & T. W.** from 19th June 1897 to 16th October 1897. Work closed on 16th October 1897. Funds for this work have been provided entirely from Famine grant. The rates are, I think, very favourable, and I attribute this to Mr. Gordon's close supervision of payments and the introduction of the piece-work system. I think this case goes a long way to show that reliable supervision though it may seem very expensive to begin with, more than saves its additional cost in the end. The introduction of **P. W.** reduced the number of robust persons by 50 per cent. It had no effect on others. The robust who had struck at first gradually returned. They remained in good condition and the task-workers steadily improved.
2·3	2·2	7	26	...	6	
2·1	2·0	8	23	2	6	

MAP
of the
CHHATTISGARH CIVIL DIVISION
SHOWING
FAMINE RELIEF OPERATIONS
PUBLIC WORKS DEPT.
Scale 1 inch = 16 Miles.
REFERENCES.
District Boundary
Railways completed
" projected
Existing Class I Roads
" " II "
" " III "
Inspection Bungalows
Dak " "
" and Inspection "
Circuit House
Famine charges
Roads undertaken as Famine Relief Works
" Portion untouched
Tanks undertaken
Test works
BALAGHAT
BHANDARA
CHANDA
WARDHA
NAGPUR
KHAIRAGARH
BILASPUR
RAIPUR
SAMBALPUR
BORASAMBAR
PATNA
BASTAR
BENGAL
HYDERABAD STATE
MADRAS PRESIDENCY

APPENDICES A TO H

OF

FAMINE REPORT, PUBLIC WORKS DEPARTMENT SECTION.

Appendix A to Famine Report, Public Works Department Section.

STATEMENT A.—List of Works which can be undertaken by the Public Works Deparment as Famine-relief Works in the event of serious Famine.

1				2	3	4	5	6	7	8	9
Civil Division.	Public Works Division.	District.	Item No.	Name of work.	Length in miles.	Details of work.	Rate per mile.	Total	Total of each road.	Equivalent number of persons at 10 to 1 rupee.	Remarks.
							Rs.	Rs.	Rs.		
Jubbulpore.	Jubbulpore.	Jubbulpore.	1	Jubbulpore-Kundam Road ...	37	Raising from Class III B. to II (metalled).	2,000	74,000	74,000	740,000	
			2	Mirganj-Jhansighat Road ...	16	Do from Class III-A to II (metalled).	3,000	48,000	48,000	480,000	
			3	Patan-Tendukhera Road ...	5	Do. ...	3,000	15,000	15,000	150,000	
			4	Sehora-Salaia Road ...	32	Complete road now being made.	...	24,000	24,000	240,000	
			5	Jubbulpore-Mirzapur Road...	66	Collecting 4½" coat of metal.	1,000	66,000	66,000	660,000	
			6	Jubbulpore-Seoni (Great Northern Road).	27	Do.	1,000	27,000	27,000	270,000	
			7	Jubbulpore-Damoh Road ...	29	Do. ..	1,000	29,000	29,000	290,000	
			8	Jubbulpore-Mandla Road ...	14	Do. ...	1 000	14 000	14,000	140,000	
			9	Jubbulpore-Mirganj Road ...	13	Do. ...	1,000	13 000	13,000	130,000	9" coat of metal is being collected on the first 6 miles.
			10	Sehora-Khamtara Road ...	36	Raising from Class III-A to II (metalled).	3 000	1,08,000	1,08,000	1,080,000	
			11	Katni-Barhi Road ...	30	Do. ..	3,000	90,000	90,000	900,000	
			12	Jhingri-Bilheri Road ...	6	Do. ..	3,000	18,000	18 000	180,000	
			13	Khamaria-Baghraji Road ...	19	Do. ..	3,000	57,000	57,000	570,000	
			14	Chaka-Bijeraghogarh Road.	18	Do. ..	3,000	54,000	54,000	540,000	
			15	Piprod-Niwar Railway Station Road.	3	Constructing a Class II.	3,000	9 000	9 000	90,000	
						Total Jubbulpore District.	...	...	6,46,000	6,460,000	
Jubbulpore.	Jubbulpore.	Mandla.	1	Dindori-Birsingpur Road ...	30	Completing as a III-B Road.	2,000	60,000	60,000	600,000	
			2	Mandla-Seoni Road ...	29	Do. ...	2,000	58,000	58,000	580,000	
			3	Jubbulpore border to Shahpura Road.	17	Raising from Class III-B to II (metalled). ..	2,000	34,000	34,000	340,000	
			4	Shahpur-Shahpura Road ...	28	Constructing a Class III-B Road ..	2,000	56,000	56,000	560,000	
			5	Jubbulpore-Mandla Road ...	46	Collecting 4½" coat of metal ..	1,000	46,000	46,000	460,000	
			6	Mandla-Bilaspur Road ...	55	Do. ..	1,000	55.000	55.000	550,000	
			7	Mandla-Dindori Road ...	64	Do. ..	1 000	64,000	64,000	640,000	
			8	Narainganj-Niwas-Shahpura Road.	54	Constructing a Class III-B Road.	2,000	1,08,000	1,08,000	1,080,000	
			9	Bichia-Bajag Road ...	66	Do. ...	2,000	1,20,000	1,20,000	1,200,000	
						Total Mandla District.	...	...	6,01,000	6,010,000	

Appendix A to Famine Report, Public Works Department Section.—(Contd.)

STATEMENT A.—(Contd.)

1				2	3	4	5	6	7	8	9
Civil Division.	Public Works Division.	District.	Item No.	Name of work.	Length in miles.	Details of works.	Rate per mile.	Total.	Total of each road.	Equivalent number of persons at 10 to 1 rupee.	Remarks.
							Rs.	Rs.	Rs.		
Jubbulpore.	Jubbulpore.	Seoni.	1	Lakhnadon-Kahani Kedarpur Road.	37	Constructing a Class II.	3,000	1,11,000	1,11,000	1,110,000	
			2	Lakhnadon-Gorabibi Road.	15	Do. ...	3,000	45,000	45,000	450,000	
			3	Seoni-Balaghat Road from Barghat to border.	13	Raising to Class I...	3,000	39,000	39,000	390,000	
			4	Kahani-Keolari Road towards Lalbara of Balaghat.	44	Do. ...	3,000	1,32,000	1,32,000	1,320,000	
			5	Seoni-Balaghat Road from Seoni to Barghat.	14	Collecting 4½" coat of metal.	1,000	14,000	14,000	140,000	
			6	Jubbulpore-Nagpur Road ...	90	Do. ...	1,000	90,000	90,000	900,000	
			7	Seoni-Chhindwara Road ...	11	Do. ...	1,000	11,000	11,000	110,000	
						Total Seoni District.	...	...	4,42,000	4,420,000	
Jubbulpore.	Saugor Independent Executive Charge.	Saugor.	1	Saugor-Rahatgarh Road ...	23	Raising from Class III-A to I.	2,000	46,000	46,000	460,000	
			2	Khimlasa-Malthon Road ...	13	Completing as Class II.	2,500	32,500	32,500	325,000	
			3	Saugor-Cawnpore Road ...	50	Raising to Class I	2,500	1,25,000	1,25,000	1,250,000	
			4	Saugor-Jhansi Road ...	39	Do. ...	2,500	97,500	97,500	975,000	
			5	Saugor-Rehli Road and border.	36	Raising from Class III-A to II (metalled).	3,000	1,08,000	1,08,000	1,080,000	
			6	Khimlasa-Beshair-Bina Road.	12	Constructing a Class II (metalled) Road	3,000	36,000	36,000	360,000	
			7	Rehli-Garhakota Road ...	12	Raising from III-A to II ...	3,000	36,000	36,000	360,000	
			8	Saugor-Kareli Road ...	53	Collecting 4½" coat of metal ...	1,000	53,000	53,000	530,000	
			9	Saugor City Road ...	5	Do.	1,000	5,000	5,000	50,000	
			10	Rehlighat Road ...	5	Do.	1,000	5,000	5,000	50,000	
			11	Bina-Etawah Road ...	1½	Do.	1,000	1,500	1,500	15,000	
			12	Saugor-Damoh Road ...	35	Do.	1,000	35,000	35,000	350,000	
						Total Saugor District.	...	...	5,80,500	5,805,000	

Appendix A to Famine Report, Public Works Department Section.—(Contd.)

STATEMENT A.—(Contd.)

1				2	3	4	5	6	7	8	9
Civil Division.	Public Works Division.	District.	Item No.	Name of work.	Length in miles.	Details of work.	Rate per mile.	Total.	Total of each road.	Equivalent number of persons at 10 to 1 rupee.	Remarks.
							Rs.	Rs.	Rs.		
Jubbulpore.	Saugor Independent Executive Charge.	Damoh.	1	Hatta-Gaisabad Road.	18	Raising from Class III-A to II (metalled).	3,000	54,000	54,000	540,000	
			2	Patan-Tendukhera Road.	8	Do. ...	3,000	24,000			
					17	Improving ..	1,000	17,000			
									41,000	410,000	
			3	Damoh-Patehra Road.	21	Completing ...	1,000	21,000	21,000	210,000	
			4	Jubbulpore-Damoh Road.	34	Collecting 4½" coat of metal ...	800	27,200	27,200	272,000	
			5	Damoh-Hatta Road.	24	Do. ...	800	19,200	19,200	192,000	
			6	Damoh-Saugor Road.	12½	Do. ...	3,000	37,500	37,500	375,000	
			7	Damoh-Batiagarh Road.	25	Raising to Class II.	3,000	75,000	75,000	750,000	
			8	Garhakota-Patharia Road.	5	Do. ...	3,000	15,000	15,000	150,000	
			9	Mala-Ghatera Road.	15	Constructing a Class II.	3,000	45,000	45,000	450,000	
			10	Hatta-Mariadoh Road.	10	Raising to Class II.	3,000	30,000	30,000	300,000	
			11	Taradehi-Sankalghat Road.	12	Do. ...	3,000	36,000	36,000	360,000	
						Total Damoh District.	...	...	4,00,900	4,009,000	
Nagpur.	Nagpur.	Nagpur.	1	Khapa-Patansaongi Road.	6	Raise to Class I from III-A	3,000	18,000	18,000	180,000	
			2	Nagpur-Katol Road—Section Kalmeshwar to Katol.	23	Do. from Class III-B. (metal collection).	1,300	29,900	29,900	299,000	
			3	Nagpur-Umrer Road—Miles 12 to 22.	11	Metal collection.	2,500	27,500	27,500	275,000	The remaining miles are already metalled.
			4	Nagpur-Jubbulpore Road.	46½	Do. ...	1,000	46,500	46,500	465,000	Existing metalled roads.
			5	Umrer-Mul Road—Umrer-Bhiwapur Section.	15	Do. ...	1,250	18,750	18,750	187,500	
			6	Nagpur-Chanda Road.	3	One coat 4½"	1,000	3,000	3,000	30,000	
			7	Munsar-Ramtek.	4	Do. ...	1,000	4,000	4,000	40,000	
			8	Nagpur-Kalmeshwar.	13	Do. ...	1,000	13,000	13,000	130,000	
			9	Nagpur-Chhindwara.	28	Do. ...	1,000	28,000	28,000	280,000	
			10	Kampti-Dygaon.	8	Do. ...	1,000	8,000	8,000	80,000	
			11	Nagpur Civil Station Roads.	16	Do. ...	1,000	16,000	16,000	160,000	
			12	Eastern Road.	29	Do. ...	1,000	29,000	29,000	290,000	
			13	Nagpur-Umrer Road.	16	Do. ...	1,000	16,000	16,000	160,000	
			14	Paldi-Bakurgunj	2	Raised to Class I.	1,750	3,500	3,500	35,000	
			15	Telenkheri-Bishnur Road and Telenkheri Drive.	...	Construction ...	...	12,400	12,400	124,000	
						Total Nagpur District ...	...	...	2,73,550	2,735,500	

Appendix A to Famine Report, Public Works Department Section.—(Contd.)

STATEMENT A.—(Contd.)

1				2	3	4	5	6	7	8	9
Civil Division.	Public Works Division.	District.	Item No.	Name of work.	Length in miles.	Details of work.	Rate per mile.	Total.	Total of each road.	Equivalent number of persons at 10 to 1 rupee.	Remarks.
							Rs.	Rs.	Rs.		
Nagpur.	Nagpur.	Wardha.	1	Wardha-Pownar Road.	5	Raise from Class III-B. to I (metal collection).	1,500	7,500	7,500	75,000	
			2	Pulgaon-Arvi Road.	8	Raise from Class II to Class I.	1,300	10,400	10,400	104,000	
			3	Do. ...	14	Collection of one coat of metal 4½".	1,000	14,000	14,000	140,000	Existing metalled road.
			4	Arvi-Ashti Road.	15	Raise from Class III-A to II.	3,000	45,000	45,000	450,000	
						Total Wardha District.	...	...	76,900	769,000	
Nagpur.	Nagpur.	Chanda.	1	Warora-Wun Road—Section Warora to Pattala.	8	Raise from Class II to Class I (metal collection).	1,335	10,680	10,680	106,800	
			2	Chanda-Sironcha Road—Section I, Chanda to Kotari.	18	Raise from III-A to Class I.	3,000	54,000			
				Chanda-Sironcha Road—Section II, Kotari to Murkhanda.	23	Do. ...	3,000	69,000	1,23,000	1,230,000	To be surveyed.
			3	Mul-Garchiroli Road.	24	Raise from Class III-B to Class I (metal collection).	1,000	24,000	24,000	240,000	Moorum already collected for this road.
			4	Nagpur-Chanda Road—Section, Warora to Chanda.	28	Metal collection 4½" coat.	1,000	28,000	28,000	280,000	Existing metalled roads.
			5	Chanda-Mul Road.	27	Do. ...	1,000	27,000	27,000	270,000	
			6	Warora-Chimur.	32	Raise from Class III-B to I.	3,000	96,000	96,000	960,000	
			7	Ambagarh-Raj-Nandgaon Road.	14	Construct as Class I Road.	3,000	42,000	42,000	420,000	
						Total Chanda District.	...	...	3,50,680	3,506,800	

Appendix A to Famine Report, Public Works Department Section.—(Contd.)

STATEMENT A.—(Contd.)

1				2	3	4	5	6	7	8	9
Civil Division.	Public Work Division.	District.	Item No.	Name of works.	Length in miles.	Details of work.	Rate per mile.	Total.	Total of each road.	Equivalent number of persons at 10 to 1 rupee.	Remarks.
							Rs.	Rs.	Rs.		
Nagpur.	Bhandara Independent Executive Charge.	Bhandara.	1	Tumsar-Rampaili Road.	27	Raise from Class III-B to Class I (moorum and metal collection).	2,464	66,528	66,528	665,280	
			2	Gondia-Balaghat Road up to Border.	12	Metal collection, 4½" coat.	2,000	24,000	24,000	240,000	An existing metalled road.
			3	Gondia-Arjuni Road.	28	Construct as Class I.	3,000	84,000	84,000	840,000	The Gondia-Phulchur Section 2¼ miles already metalled.
			4	Amgaon-Lanji Road—Section Amgaon to border of District.	3	Metal collection, 4½" coat.	3,000	9,000	9,000	90,000	An existing metalled road for 1 mile of this section.
			5	Pauni to Bhiwapur Road.	8	Construct as Class I.	3,000	24,000	24,000	240,000	To be surveyed.
			6	Bhandara Railway Feeder Road.	7	Metal collection, 4½" coat.	1,000	7,000	7,000	70,000	Existing metalled roads.
			7	Bhandara Chord Line.	1	Do.	1,000	1,000	1,000	10,000	
			8	Eastern Road in Bhandara District to Choolbund.	40	Do.	1,000	40,000	40,000	400,000	
			9	Tumsar-Dowhali Road.	3	Do.	1,000	3,000	3,000	30,000	
			10	Amgaon-Satgaon Road.	16	Raise from Class III-A to Class I.	3,000	48,000	48,000	480,000	
			11	Khyrlanji-Tirora Road.	16	Do.	3,000	48,000	48,000	480,000	
			12	Choolbund-Arjuni—Section of Eastern Road.	5	Do. from Class III-B.	2,000	10,000	10,000	100,000	
						Total Bhandara District.	...	...	3,64,528	3,645,280	
Nagpur.	Bhandara Independent Executive Charge.	Balaghat.	1	Balaghat-Baihar Road—		Raising from Class III-A to Class II.					Road already aligned, surveyed and estimated for.
				1st Section...	8		3,000	24,000			
				2nd do. ...	6	Do. ...	8,000	48,000			
				3rd do. ...	28	Do.	3,000	84,000			
			2	Rampaili-Lalbara Road—					1,56,000	1,560,000	
				1st Section ...	8	Construction ...	3,000	60,000	60,000	600,000	Do.
				2nd do. ...	12						
			3	Balaghat-Gondia Road up to Border.	15	Collection of metal.	3,000	45,000	45,000	450,000	Existing metalled road.
			4	Amgaon-Lanji Road up to Border.	14	Construction as a Class II Road.	3,000	42,000	42,000	420,000	
			5	Tanks in Baihar Tahsili.	...	Construction ..	...	10,000	10,000	100,000	
			6	Waraseoni-Katangi.	16	Raising from Class III-A to II.	3,000	48,000	48,000	480,000	
			7	Waraseoni-Balaghat Road.	12	Do. ...	1,000	12,000	12,000	120,000	
			8	Lanji-Balaghat Road.	31	Construction ...	3,000	93,000	93,000	930,000	
			9	Baihar-Mandla Road up to Border.	14	Raising from Class III-A to II.	3,000	42,000	42,000	420,000	
						Total Balaghat District.	...	...	5,08,000	5,080,000	

Appendix A to Famine Report, Public Works Department Section.—(Contd.)

STATEMENT A.—(Contd.)

1				2	3	4	5	6	7	8	9
Civil Division.	Public Works Division.	District.	Item No.	Name of work.	Length in miles.	Details of work.	Rate per mile.	Total.	Total of each road.	Equivalent number of persons at 10 to 1 rupee.	Remarks.
							Rs.	Rs.	Rs.		
Nerbudda.	Hoshangabad.	Hoshangabad.	1	Piparia-Sandia Road.	15	Completing by collecting and spreading bujri and metal.	2,400	36,000	36,000	360,000	
			2	Piparia-Sobhapur Road.	7	Construction ...	4,730	33,113	33,113	331,130	
			3	Semri-Barkach Road.	9	Raising in class..	3,222	28,998	28,998	289,980	
			4	Sobhapur-Bhatgaon Road.	5	Do. ...	3,100	15,500	15,500	155,000	
			5	Old Bombay Road.	100	Do. ...	2,820	2,82,000	2,82,000	2,820,000	
			6	Babai-Bagra Road.	5	Do. ...	6,700	33,500	33,500	335,000	
			7	Harda-Handia Road.	13¼	Do. ...	3,020	40,034	40,034	400,340	
			8	Tigaria-Dularia Road.	7	Do. ...	4,000	28,000	28,000	280,000	
			9	Semri-Zumani Road.	5	Construction ...	3,900	19,500	19,500	195,000	
			10	Seoni-Lokartalai Road.	7	Raising in class..	3,428	23,996	23,996	239,960	
			11	Lokartalai-Dheknа Road.	8	Do. ...	3,500	28,000	28,000	280,000	
			12	Sohagpur *via* Khurpapur to the Denwa River.	14	Construction ...	2,800	39,200	39,200	392,000	
			13	Piparia-Pachmarhi Road.	32	Metal collection..	2,125	68,000	68,000	680,000	
			14	Hoshangabad-Itarsi Road.	11	Do. ...	1,963	21,593	21,593	215,930	
			15	Itarsi-Dhar Road.	20	Do. ...	2,740	54,808	54,808	548,080	
			16	Hoshangabad Station Roads.	1½	Do. ...	2,117	3,176	3,176	31,760	
			17	Seoni Railway Station Road.	1½	Do. ...	2,183	3,274	3,274	32,740	
			18	Semri Railway Station Road.	1½	Do. ...	2,495	3,742	3,742	37,420	
			19	Timurni Railway Station Road.	¾	Do. ...	3,088	2,316	2,316	23,160	
			20	Hoshangabad Cemetery Road.	½	Do. ...	1,470	735	735	7,350	
			21	Sohagpur-Sobhapur Road.	6¼	Do. ...	1,960	12,250	12,250	122,500	
			22	Timurni-Sodhalpur-Dhekna Road.	20	Raising in class.	2,650	53,000	53,000	530,000	
			23	Khirkian-Charwa Road.	5¼	Do. ...	3,048	16,002	16,002	160,020	
			24	Bankheri-Umardha Road.	12	Do. ...	3,100	37,200	37,200	372,000	
						Total Hoshangabad District.	...	...	8,83,937	8,839,370	
Nerbudda.	Hoshangabad.	Nimar.	1	Khandwa-Mohgat Road.	3½	Raising in class.	2,995	10,485	10,485	104,850	
			2	Ajanti Canal ...	...	Extension ...	...	6,130	6,130	61,300	
			3	Harsud to Khandwa Road *via* Kalam and Bhamgarh.	40	Construction and raising in class.	2,557	1,02,280	1,02,280	1,022,800	
			4	Old Bombay Road	80	Raising in class.	2,800	2,24,000	2,24,000	2,240,000	
			5	Burhanpur Railway Station Road.	3	Collection of metal.	1,513	4,540	4,540	45,400	
						Total Nimar District.	...	...	3,47,435	3,474,350	

Appendix A to Famine Report, Public Works Department Section.—(Contd.)

STATEMENT A.—(Contd.)

1				2	3	4	5	6	7	8	9
Civil Division.	Public Works Division.	District.	Item No.	Name of work.	Length in miles.	Details of work.	Rate per mile.	Total.	Total of each road.	Equivalent number of persons at 10 to 1 rupee.	REMARKS.
							Rs.	Rs.	Rs.		
NERBUDDA.	HOSHANGABAD.	BETUL.	1	Badnur to Dhekna Road *vid* Kheri and Chicholi.	54	Raising in class.	2,370	1,28,020	1,28,020	1,280,200	
			2	Badnur-Ellichpur Road.	48	Do. ...	3,000	1,44,000	1,44,000	1,440,000	
			3	Shahpur-Jambara Road.	31	Do. ...	3,000	93,000	93,000	930,000	
			4	Dhaba-Khomai Road.	3	Do. ...	3,000	9,000	9,000	90,000	
			5	Betul-Multai Road ...	25	Do. ...	1,727	43,174	43,174	431,740	
			6	Multai-Nagpur Road up to Border.	15	Do. ...	2,586	38,795	38,795	387,950	
			7	Dhar-Betul Road ...	38	Collection of metal.	2,062	78,360	78,360	783,600	
			8	Badnur Station Road.	1¼	Do. ...	2,433	3,041	3,041	30,410	
						Total Betul District.	...	...	5,37,390	5,373,900	
NERBUDDA.	NARSINGHPUR INDEPENDENT EXECUTIVE CHARGE.	NARSINGHPUR.	1	Old Bombay Road ...	63	Raising in class and metalling.	3,950	2,48,850	2,48,850	2,488,500	
			2	Narsinghpur-Sankal Road.	15	Construction ...	2,417	36,255	36,255	362,550	
			3	Narsinghpur-Chhindwara Road from Singhpur.	40	Do. ...	4,208	168,325	168,325	1,683,250	
			4	Chhota Chhindwara Road to Srinagar.	7	Raising in class.	3,100	21,700			
			5	Srinagar Road to Border.	5	Construction ...	3,500	17,500	39,200	392,000	
			6	Gadarwara Road to Border towards Pagara.	17	Do. ...	3,500	59,500	59,500	595,000	
			7	Gadarwara-Sainkhera Road.	13	Raising in class.	3,252	42,276	42,276	422,760	
			8	Barmhan-Tendukhera Road.	15	Completing and raising in class.	1,020	15,300	15,300	153,000	
			9	Sankal-Chhota Chhindwara Road.	10	Raising in class.	3,100	31,000	31,000	310,000	
			10	Narsinghpur-Lakhnadon Road.	26	Do. ...	2,104	54,704	54,704	547,040	
			11	Narsinghpur-Singhpur Road.	4½	Do. ...	2,000	9,000	9,000	90,000	
			12	Kareli-Amgaon Road.	3¾	Do. ...	2,000	7,500	7,500	75,000	
			13	Khulri-Bohani Road...	4½	Do. ...	2,000	9,000	9,000	90,000	
			14	Kareli-Saugor Road...	22¼	Metal collection.	2,383	53,022	53,022	530,220	
			15	Narsinghpur-Railway Station Road.	3	Do.	2,851	8,553	8,553	85,530	
			16	Gadarwara Railway Station Road.	1¾	Metal collection and raising in class.	3,304	5,782	5,782	57,820	
			17	Babai-Barha Road ...	7	Construction ...	3,100	21,700	21,700	217,000	
						Total Narsinghpur District.	...	...	8,09,967	8,099,670	

Appendix A to Famine Report, Public Works Department Section.—(Contd.)

STATEMENT A.—(Contd.)

1				2	3	4	5	6	7	8	9
Civil Division.	Public Works Division.	District.	Item No	Name of work.	Length in miles.	Details of work.	Rate per mile.	Total.	Total of each road.	Equivalent number of persons at 10 to 1 rupee.	Remarks.
							Rs.	Rs.	Rs.		
Nerbudda.	Narsinghpur Independent Executive Charge.—(Concld.)	Chhindwara.	1	Tamia Tank ...	...	Construction ...	...	8,813	8,813	88,130	
			2	Narsingh pur-Chhindwara Road ...	34	Raising in class.	2,627	89,318	89,318	893,180	
			3	Chhindwara-Belgaon-Mutkuli Road ...	62	Do.	1,502	93,124	93,124	931,240	
			4	Chhindwara-Seoni-Road up to Border ...	32	Collection of metal.	1,000	32,000	32,000	320,000	
			5	Chhindwara-Nagpur Road ...	34¼	Do.	1,380	47,265	47,265	472,650	
			6	Umrer Road to Betul border ...	24	Raising in class.	1,042	25,008	25,008	250,080	
			7	Pagara Tank ...	...	Do.	...	...	...	...	Under construction from Jagir funds.
			8	Chhindwara-Betul Road ...	...	Do.	...	...	...	...	Under construction from Provincial funds.
						Total Chhindwara District	...	...	2,95,528	2,955,280	
Chhattisgarh.	Eastern.	Raipur.		Tilda-Kawardha Road—							
			1	(i) Section, Tilda-Simga.	9	To be raised in class.	3,000	27,000			
			2	(ii) Section, Simga-Kawardha.	24	Construct as Class I Road.	3,000	72,000	99,000	990,000	
			3	Tilda-Sirpur Road.	31	Do. ...	4,000	1,24,000	1,24,000	1,240,000	
				Drug-Deorbija Road—							
			4	(i) Section. Drug to Dhamda.	20	To be raised from Class III-B to Class I.	2,000	40,000			
			5	(ii) Section, Dhamda to Deorbija.	16	Construct Class II Road.	3,000	48,000	88,000	880,000	
						Carried over ...	...	...	3,11,000	3,110,000	

Appendix A to Famine Report, Public Works Department Section.—(Contd.)

STATEMENT A.—(Contd.)

1				2	3	4	5	6	7	8	9
Civil Division.	Public Works Division.	District.	Item No.	Name of work.	Length in miles.	Details of work.	Rate per mile.	Total.	Total of each road.	Equivalent number of persons at 10 to 1 rupee.	Remarks.
							Rs.	Rs.	Rs.		
						Brought forward...	...	...	3,11,000	3,110,000	
			6	Deorbija to Bametera.	9	Construct Class II Road.	3,000	27,000	27,000	270,000	
			7	Loan-Bhatapara Road.	16	Metalling the road with stone-metal.	2,000	32,000	32,000	320,000	Some miles were metalled a few years ago.
				Raipur-Sambalpur Road—							
			8	Section Raipur to Arang.	21	Do. ...	3,000	63,000			At present there is moorum over this road.
			8-A	Road between Jhalap and Sankra.	20	Do. ...	1,500	30,000	93,000	930,000	
				Raipur-Amera-Baloda Road—							
			9	(i) Section, Raipur to Kharora.	23	Raise to Class I.	2,000	46,000			
			10	(ii) Section, Kharora to Baloda.	20	Do.	2,000	40,000			
					9	Construct as Class II.	3,000	27,000	1,13,000	1,130,000	
			11	Drug to Balod ...	35	Do. ...	3,000	1,05,000	1,05,000	1,050,000	
			12	Drug Station to Town.	1½	Remetalling the road with stone metal.	2,000	3,000	3,000	30,000	Existing metal is mostly worn out.
			13	Rajim to boundary of Bindra-Nawagarh.	17	Construct as Class II Road.	3,000	51,000	51,000	510,000	
			14	Raipur-Kumhari Dhamda-Gandai Road—							
				(i) Section, Dhamda-Gandai.	22	Construct as Class II.	3,000	66,000			
				(ii) Section, Kumhari-Patharia.	13	Do. ...	3,000	39,000	1,05,000	1,050,000	
			15	Loan-Katangi—Section of Loan-Sarangarh Road.	10	Do. ...	3,000	30,000	30,000	300,000	
			16	Gunderdehi to Arjunda ...	6	To be constructed as Class II.	3,000	18,000	18,000	180,000	
			17	Gandai-Kawardha Road.	14	Moorum collection.	1,500	21,000	21,000	210,000	
			18	Raj-Nandgaon-Antagarh Road.	68	To be constructed as a Class II.	3,000	2,04,000	2,04,000	2,040,000	
						Total Raipur District.	...	...	11,13,000	11,130,000	

CHHATTISGARH.—(Concld.)
EASTERN.
RAIPUR.

Appendix A to Famine Report, Public Works Department Section.—(Contd.)

STATEMENT A.—(Concld.)

Civil Division.	Public Works Division.	District.	Item No.	Name of Work.	Length in miles.	Details of work.	Rate per mile.	Total.	Total of each road.	Equivalent number of persons at 10 to 1 rupee.	Remarks.
1				2	3	4	5	6	7	8	9
							Rs.	Rs.	Rs.		
Chhattisgarh.	Eastern	Bilaspur.	1	Bilaspur-Mungeli Road-Section from Kotakoni to Mungeli.	22	This is to be raised from Class III-B to Class II Road.	2,500	55,000	55,000	550,000	
			2	Bhatapara-Mungeli Road (i) Section, Bhatapara to Nandghat.	9	Construct Class II Road.	3,000	27,000	...	...	
			3	(ii) Section Nandghat to Mungeli.	21	Improve miles where most needed.	3,000	63,000	90,000	900,000	
			4	Road from District Court-house, Bilaspur, to Bilaspur Railway Station.	3	Construct a Class I Road.	4,000	12,000	12,000	120,000	
			5	Bilaspur-Seorinarayan Road as far as Masturi only.	10	Construct as II Road.	3,000	30,000	30,000	300,000	
			6	Bilaspur-Ratanpur Road.	14	This is to be raised from Class III-B to Class II.	2,000	28,000	28,000	280,000	
			7	Seorinarayan Pamgarh Road.	14	Construct as Class II Road.	3,000	42,000	42,000	420,000	
			8	Pamgarh to Akaltara Railway Station.	12	This is to be raised from Class III-B to Class II.	2,000	24,000	24,000	240,000	
			9	Bhatapara-Loan Road, Bilaspur District.	12	Stone metal to be used. At present there is moorum only.	2,000	24,000	24,000	240,000	
			10	Kotah-Lormi Road and on to Border.	28	Construct as Class I.	4,000	1,12,000	1,12,000	1,120,000	
			11	Mungeli-Setganga Section of Bilaspur Mandla Road.	12	Raise to Class II.	3,000	36,000	36,000	360,000	
			12	Katangi-Sarangarh Section of Loan-Sarangarh Road.	28	Construct as Class II.	3,000	84,000	84,000	840,000	
			13	Akaltara Baloda Road.	11	Raise to Class II.	3,000	33,000	33,000	330,000	
						Total Bilaspur District.	...	...	5,70,000	5,700,000	
Chhattisgarh.	Eastern.	Sambalpur.	1	Malkhurda-Khorsi Road.	16	To be constructed as Class II Road.	2,000	32,000	32,000	320,000	The lines have not been surveyed but rate per mile fixed by Mr. Harriott.
			2	Dabra to Khorsia ...	12	Do. ...	2,000	24,000	24,000	240,000	
			3	Sonmal to Sohela ...	15	Do. ...	3,000	45,000	45,000	450,000	Road lines not yet surveyed.
			4	Padamapur to Kotmar (portion in Khalsa).	5	Do. ...	3,000	15,000	15,000	150,000	
						Total Sambalpur District ...	...	...	1,16,000	1,160,000	

General Abstract of Statement A.

Civil Division.	Public Works Division.	District.	Approximate estimated cost at Public Works Department rates.	Equivalent number of persons at 10 to 1 rupee.	Remarks.
			Rs.		
JUBBULPORE.	JUBBULPORE.	Jubbulpore	6,46,000	6,460,000	
		Mandla	6,01,000	6,010,000	
		Seoni	4,42,000	4,420,000	
	SAUGOR INDEPENDENT.	Saugor	5,80,500	5,805,000	
		Damoh	4,00,900	4,009,000	
		Total Jubbulpore Civil Division ...	26,70,400	26,704,000	
NAGPUR.	NAGPUR.	Nagpur	2,73,550	2,735,500	
		Wardha	76,900	769,000	
		Chanda	3,50,680	3,506,800	
	BHANDARA INDEPENDENT.	Bhandara	3,64,528	3,645,280	
		Balaghat	5,08,000	5,080,000	
		Total Nagpur Civil Division ...	15,73,658	15,736,580	
NERBUDDA.	HOSHANGABAD.	Hoshangabad	8,83,937	8,839,370	
		Nimar	3,47,435	3,474,350	
		Betul	5,37,390	5,373,900	
	NARSINGHPUR INDEPENDENT.	Narsinghpur	8,09,967	8,099,670	
		Chhindwara	2,95,528	2,955,280	
		Total Nerbudda Civil Division ..	28,74,257	28,742,570	
CHHATTISGARH.	EASTERN.	Raipur	11,13,000	11,130,000	
		Bilaspur	5,70,000	5,700,000	
		Sambalpur	1,16,000	1,160,000	
		Total Chhattisgarh Civil Division ...	17,99,000	17,990,000	
		GRAND TOTAL ...	89,17,315	89,173,150	

Appendix A to Famine Report, Public Works Department Section.

STATEMENT B.—Works undertaken in each District.

Civil Division.	Public Works Division.	District.	Item No.	Name of Work.	Amount of estimate as sanctioned at ordinary P. W. D. rates.	Charge No.	Total expenditure from commencement.	Remarks.
					Rs.		Rs.	
Jubbulpore.	Jubbulpore.	Jubbulpore.	1	*Patan-Tendukhera Road. Length 5 miles in Jubbulpore—*				
				No. 3 of Statement A.—Raising in class from Patan to border.	30,915	1 (Patan).	42,211	
			2	*Mirganj-Jhansighat Road. Length 16 miles—*				
				No. 2 of Statement A.—8 miles raising in class.	34,620	2 (Sahajpur).	89,950	
			3	*Jubbulpore Marble Rocks Road. Length 13 miles—*				
				No. 9 of Statement A.—Collection of 9" coat of metal for 6 miles.	16,030	9 (Karunbel).	42,180	
			4	*Jubbulpore-Seoni, Great Northern Road—*				
				No. 6 of Statement A.—Length 27 miles. Collection of 4½" coat of metal for 7 miles.	7,484	3 (Nigree).	32,844	
			5	*Jubbulpore-Kundam Road. Length 37 miles—*				
				No. 1 of Statement A.—12 miles raising in class.	44,000	4 (Khamaria).	50,048	
			6	*Breaking metal at Satpura* ...	13,400	21	29,415	
			7	*Katni-Barhi Road. Length 27 miles—*				
				No. 11 of Statement A.—Raising 10 miles ...	25,508	7 (Paraswara) and 18 (Barhi).	57,697	
			8	*Jubbulpore-Mirzapur Road. Length 66 miles—*				
				No. 5 of Statement A.—Collection of metal and moorum for Jhingri section, 6 miles.	5,702	8	6,508	
			9	*Jhingri-Bilheri Road. Length 6 miles—*				
				No. 12 of Statement A.—Raising in class ...	10,953	8	16,451	
			10	*Jubbulpore-Mirzapur Road. Length 66 miles—*				
				No. 5 of Statement A.—Collection of metal and moorum for Chaka section, 6 miles.	11,048	15	18,152	
			11	*Jubbulpore-Mirzapur Road. Length 66 miles—*				
				No. 5 of Statement A.—Collection of metal and moorum for Kailwara section, 6 miles.	5,702	16	4,136	
			12	*Chaka-Bijeraghogarh Road. Length 18 miles—*				
				Raising in class 18 miles ...	28,360	17 & 19	39,504	
			13	Breaking ballast for Indian-Midland Railway at Deogaon.	230	20	984	
				Carried over ...	2,33,952		4,30,080	

Appendix A to Famine Report, Public Works Department Section.—(Contd.)

STATEMENT B.—(Contd.)

Civil Division.	Public Works Division.	District.	Item No.	Name of Work.	Amount of estimate as sanctioned at ordinary P. W. D. rates.	Charge. No.	Total expenditure from commencement.	REMARKS.
					Rs.		Rs.	
JUBBULPORE.—(*Concld.*)	JUBBULPORE.—(*Concld.*)	JUBBULPORE.—(*Concld.*)		Brought forward ...	2,33,952		4,30,080	
			14	*Sehora-Khamtara Road. Length 13 miles—*				
				No. 10 of Statement A.—Raising 12 miles in class Survey	42,384 259	5 & 11	48,752	
					42,643			
			15	*Jubbulpore-Mirzapur Road. Length 66 miles—*				
				No. 5 of Statement A.—Collection of metal and moorum for Sleemanabad section, 10 miles.	20,196	6 & 12	67,904	
			16	*Mirzapur Road, Piprod—*				
				No. 5 of Statement A.—Collection of 4½" coat of metal for 6 miles.	5,702	13	19,915	
			17	*Piprod-Niwar Road. Length 3 miles—*				
				Constructing a new road ...	11,476	13	3,474	
			18	*Sehora-Salaia Road. Length 32 miles—*				
				No. 4 of Statement A.—New construction ...	20,200	14	9,925	
				Total Jubbulpore District ...	3,34,169		5,80,050	
JUBBULPORE.	JUBBULPORE.	MANDLA.	1	*Jubbulpore-Mandla Road. 46 miles in Mandla—*				
				No. 5 of Statement A.—Collection of 4½" coat of metal for whole length.	31,049	2 (Tikaria) and 5 (Byadauni).	67,931	
			2	*Mandla-Dindori Road. Length 66 miles—*				
				No. 7 of Statement A.—Collection of metal and moorum for 20 miles.	39,576	4 (Chabi).	41,706	
			3	*Mandla-Bilaspur Road. 55 miles in Mandla—*				
				No. 6 of Statement A.—Collection of metal and moorum for 15 miles.	37,422	3 (Thonda)	49,869	
			4	*Mandla-Seoni Road. 29 miles in Mandla—*				
				No. 2 of Statement A.—Collection of metal for first section of 10 miles from Mandla.	8,553	6	30,895	
			5	*Shahpur-Shahpura Road. Length 28 miles—*				
				No. 4 of Statement A.—Constructing a new road.	46,698	1	58,535	*Work remaining to be done :—* Completing road. Rs. 5,850
			6	*Dindori-Birsinghpur Road. 30 miles—*				
				No. 1 of Statement A.—Collection of metal and moorum from Dindori to Shahpur, 8 miles.	11,404	7	18,225	
			7	Constructing Narainganj-Niwas-Shahpura Road in the Mandla District.	9,538		9,528	
				Total Mandla District ...	1,84,240		2,76,689	

Appendix A to Famine Report, Public Works Department Section.—(Contd.)

STATEMENT B.—(Contd.)

Civil Division.	Public Works Division.	District.	Item No.	Name of Work.	Amount of estimate as sanctioned at ordinary P. W. D. rates.	Charge. No.	Total expenditure from commencement.	Remarks.
					Rs.		Rs.	
Jubbulpore.—(*Contd.*)	Jubbulpore.—(*Contd.*)	Seoni.	1	*Great Northern Road, 90 miles—*				
				No. 6 of Statement A.—Collection and consolidation of 4½″ coat of metal on miles 99 to 138 (40 miles), and earthen sides.	56,357	1 & 4	41,956	
			2	*Lakhnadon-Kahani-Kedarpur Road, 37 miles—*				*Work remaining to be done:—* Rs. Completing 16,000 road.
				No. 1 of Statement A.—Constructing the whole road.	69,866	2 & 5	67,213	
			3	*Seoni-Balaghat Road—Barghat section, 14 miles—*				
				No. 5 of Statement A.—Collection and consolidation of 4½″ coat of metal, 1st section, 14 miles, from Seoni to Balaghat, and 9″ coat of metal collection for 13 miles from Barghat to border, and earthen sides.	52,282	3	75,247	
			4	*Keolari through Ugli towards Lalbarra in the Balaghat District—*				
				No. 4 of Statement A.—Raising in class ...	16,380	6	11,784	Do. do. 5,500
				Survey	880		307	
					17,260		12,091	
				Total Seoni District ...	1,95,765		1,96,507	
Jubbulpore.—(*Contd.*)	Saugor Independent Executive Charge.	Saugor.	1	*Saugor-Cawnpore Road. Length 50 miles—*				
				No. 3 of Statement A.—Raising 30 miles from Barodia.	92,735	2 (Rorawun) and 5 (Shahgarh).	94,075	
			2	*Circular road round the lake at Saugor—*				
				Re-metalling with 4½″ coat of metal, 4 miles ...	6,144	12	3,672	
			3	*Khimlasa-Besahari-Bina Road. Length 12 miles—*				
				(i) No. 6 of Statement A.—Making a class I road from Khimlasa to Etawah.	49,800	...	73,500	
				(ii) Collection of metal on Bina-Etawah section.	1,573	9 (Besahari and). 7 (Khimlasa).	541	
				(iii) Survey	52	...	...	
					51,425		74,041	
				Carried over ...	1,50,304		1,71,788	

Appendix A to Famine Report, Public Works Department Section.—(Contd.)

STATEMENT B.—(Contd.)

Civil Division.	Public Works Division.	District.	Item No.	Name of Work.	Amount of estimate as sanctioned at ordinary P. W. D. rates.	Charge No.	Total expenditure from commencement.	REMARKS.
					Rs.		Rs.	
JUBBULPORE.—(*Contd.*)	SAUGOR INDEPENDENT EXECUTIVE CHARGE.—(*Contd.*)	SAUGOR.—(*Contd.*)		Brought forward ...	1,50,304		1,71,788	
			4	*Khimlasa-Malthon Road. Length* 13 *miles*—				
				No. 2 of Statement A.—Completing as class II road.	49,912	4	97,254	
			5	*Saugor-Jhansi Road. Length* 39 *miles*—				
				No. 4 of Statement A.—Raising in class ...	28,932	4-*A*	21,945	
			6	*Saugor-Rahatgarh Road. Length* 23 *miles*—				
				No. 1 of Statement A.—Raising the whole to class I.	42,872	1 & 6	1,23,481	*Work remaining to be done* :— Rs. Earthwork—Formation of Road ... 5,258; Metalling ... 12,796; Bridges and culverts ... 770; Mile stones and miscellaneous ... 154; Contingencies ... 949; Total ... 19,927
				Annual repairs to do. during 1897-98 ...	741		...	
					43,613		1,23,481	
			7	*Saugor-Rehli Road. Length* 36 *miles*—				
				No. 5 of Statement A.—Raising to class II ...	1,37,227	8 & 10	43,623	
				Survey	545		...	Rs. Earthwork and formation of Road ... 12,714; Metalling ... 33,938; Repairing existing causeways and culverts ... 482; Contingencies 2,356; Total ... 49,490
					1,37,772		43,623	
			8	*Saugor-Kareli Road. Length* 53 *miles*—				
				No. 8 of Statement A.—Collecting 4½″ coat of metal.	45,689	3 & 11	72,695	
				Total Saugor District ...	4,56,222		5,30,786	

Appendix A to Famine Report, Public Works Department Section.—(Contd.)

STATEMENT B.—(Contd.)

Civil Division.	Public Works Division.	District.	Item No.	Name of Work.	Amount of estimate as sanctioned at ordinary P. W. D. rates.	Charge No.	Total expenditure from commencement.	Remarks.
					Rs.		Rs.	
Jubbulpore.—(*Contd.*)	Saugor Independent Executive Charge.—(*Contd.*)	Damoh.	1	*Mala-Ghatera Road. Length* 15 *miles*—				
				No. 9 of Statement A.—Constructing a class II road.	41,870	8	8,098	*Work remaining to be done:*— Rs. Earthwork ... 4,971 Road dams and culverts ... 4,345 Metalling ... 27,034 Mile stones and miscellaneous. 60 Road-side avenues ... 1,044 Contingencies, &c. ... 3,725 Total ... 40,979
				Survey			76	
			2	*Jubbulpore-Damoh Road. Length* 63 *miles*—				
				No. 4 of Statement A.—Collecting 4½″ coat of metal for renewals on the portion lying in Damoh District, 34 miles.	35,984	3 & 4	51,951	
			3	*Abhana-Tejgarh Road. Length* 12 *miles*—				
				Raising in class ...	6,257	3	16,754	
				Survey			49	
			4	*Patan-Tendukhera Road. Length* 25 *miles*—				
				No. 2 of Statement A.—Raising 8 miles to class II.	26,445	9	23,022	*Work remaining to be done:*— Rs. Earthwork ... 1,774 Metalling ... 17,499 Bridges and culverts ... 2,231 Mile stones and miscellaneous. 45 Contingencies, &c. ... 2,154 Total ... 23,703
				Improving 17 miles of above ...				
				Carried over ...	1,10,556		99,950	

Appendix A to Famine Report, Public Works Department Section.—(Contd.)

STATEMENT B.—(Contd.)

Civil Division.	Public Works Division.	District.	Item No.	Name of Work.	Amount of estimate as sanctioned at ordinary P. W. D. rates.	Charge No.	Total expenditure from commencement.	REMARKS.
					Rs.		Rs.	
				Brought forward ...	1,10,556		99,950	
			5	*Hatta-Gaisabad Road. Length 18 miles—*				
				No. 1 of Statement A.—Raising the whole to class II.	56,992	1 & 5	94,168	*Work remaining to be done :—* Rs. Earthwork ... 6,910; Metalling ... 35,737; Road dams and culverts. 3,562; Contingencies, &c. 4,620; Total ... 50,829
			6	*Damoh-Patehra Road. Length 21 miles—*				
				No. 3 of Statement A.—Completing the whole as class II.	63,973	7	13,392	*Work remaining to be done :—* Rs. Earthwork ... 1,000; Metalling ... 53,881; Causeways and culverts. 5,010; Contingencies, &c. 5,989; Total ... 65,880
			7	*Damoh-Batiagarh Road. Length 25 miles—*				
				No. 7 of Statement A.—Raising to class II ..	76,666	2	69,502	*Work remaining to be done :—* Rs. Earthwork ... 3,140; Metalling ... 54,088; Bridges and culverts. 1,914; Contingencies, &c. 5,914; Total ... 65,056
			8	*Damoh-Saugor Road. Length 47 miles—*				
				No. 6 of Statement A.—Collection of metal for the portion lying in the Damoh District, 12½ miles.	23,545	6	...	
			9	*Patharia-Garhakota Road. Length 8½ miles* ..	30,170	...	26,437	
				Completing and metalling the whole length ...				
			10	*Hatta-Mariadoh Road. Length 8½ miles—*				
				No. 10 of Statement A.—Raising in class ..	38,445	...	52,551	*Work remaining to be done :—* Rs. Earthwork ... 3,734; Metalling ... 17,524; Road dams and culverts. 4,779; Contingencies, &c. 2,609; Total ... 28,641
				Total Damoh District ...	4,00,347	...	3,56,000	

JUBBULPORE.—*(Contd.)*

SAUGOR INDEPENDENT EXECUTIVE CHARGE.—*(Concld.)*

DAMOH.—*(Concld.)*

Appendix A to Famine Report, Public Works Department Section.—(Contd.)

STATEMENT B.—(Contd.)

Special Establishment.

Civil Division.	Public Works Division.	District.	Amount of estimate as sanctioned at ordinary P. W. D. rates.	Total expenditure from commencement.	Remarks.
			Rs.	Rs.	
JUBBULPORE.	JUBBULPORE.	Jubbulpore District	40,500		
		Mandla do.	16,200		
		Seoni do.	12,000		
		Total ...	68,700	1,60,048	
	SAUGOR INDEPENDENT CHARGE.	Saugor District	47,880		
		Damoh do.	33,811		
		Total ...	81,691		
		Total Jubbulpore Civil Division ...	1,50,391	1,60,048	

Tools and Plant.

Civil Division.	Public Works Division.	Amount of estimate as sanctioned at ordinary P. W. D. rates.	Total expenditure from commencement.	Remarks.
		Rs.	Rs.	
JUBBULPORE	Jubbulpore Division	1,07 525	1,63,282	
	Saugor Independent Executive Charge ...	50,531		
	Total Jubbulpore Civil Division ...	1 58,056	1.63 282	

Hutting, Conservancy and Medical.

Civil Division.	Public Works Division.	District.	Amount of estimate as sanctioned at ordinary P. W. D. rates.	Total expenditure from commencement.	Remarks.
			Rs.	Rs.	
JUBBULPORE.	JUBBULPORE.	Jubbulore District	45,400		
		Mandla do.	19 800		
		Seoni do.	15,870		
		Total ...	81,070	2,08,663	
	SAUGOR INDEPEN-DENT CHARGE.	Saugor District	53,600		
		Damoh do.	38,500		
		Total ...	92,100		
		Total Jubbulpore Civil Division ...	1,73,170	2,08,663	

Appendix A to Famine Report, Public Works Department Section.—(Contd.)

STATEMENT B.—(Contd.)

Civil Division.	Public Works Division.	District.	Item No.	Name of Work.	Amount of estimate as sanctioned at ordinary P. W. D. rates.	Charge No.	Total expenditure from commencement.	Remarks.
					Rs.		Rs.	
Nagpur.	Nagpur.	Nagpur.	1	*Repairs to Nagpur Station Roads and 5 miles round—*				
				(i) Backerganj Road—2 miles ...	3,578		7,555	
				(ii) Station Road. Collection and consolidation.	23,109		42,237	
				(iii) Collection and consolidation on G. N. Road—miles 3 to 6.	13,019		10,513	
				(iv) Do. Southern Road—miles 3 to 5.	6,053	1	2,032	
				(v) Do. North-Western Road—miles 3 to 5.	4,827		4,306	
				(vi) Do. Eastern Road—miles 3 to 5.	4,464		9,329	
					55,050		75,972	
			2	*Telenkheri-Bisnur Road—* ...	3,415			
				Repairs to Bisnur Road ...	1,872	1*a*	22,256	
				Telenkheri-Ambajheri Road ...	8,672			
					13,959		22,256	
			3	*Nagpur-Umrer Road—*				
				22 miles collection and consolidation ...	27,220	2	12,959	
			4	*Patansaongi-Khapa Road—*				
				6 miles raising in class ...	2,353	3	2,355	
			5	*Umrer-Bhewapur Section of Nagpur-Mul Road—*				
				15 miles metal collection and consolidation ...	18,711	5	24,495	
			6	*Kalmeshwar-Katol Road—*				
				Metal collection and consolidation—23 miles ..	29,914	6	26,821	
			7	*Nagpur-Kalmeshwar Road—*				
				Collection and consolidation—11 miles ...	15,369	7	19,221	
			8	*Eastern Road, Section 6—21 miles—*				
				Collection and consolidation ...	22,885	8	...	
				Carried over ...	1,85,461		1,84,079	

Appendix A to Famine Report, Public Works Department Section.—(Contd.)

STATEMENT B.—(Contd.)

Civil Division.	Public Works Division	District.	Item No.	Name of Work.	Amount of estimate as sanctioned at ordinary P. W. D. rates.	Charge No.	Total expenditure from commencement.	REMARKS.
					Rs.		Rs.	
NAGPUR.—(*Contd.*)	NAGPUR.—(*Contd.*)	NAGPUR.—(*Concld.*)		Brought forward ...	1,85,461		1,84,079	
			9	*Great Northern Road*—				
				(i) Collection and consolidation—miles 8—20.	32,718	4	1,34,032	
				(ii) Do. Do. „ 41—48½				
				(iii) Do. Do. „ 21—40	34,366			
				(iv) Mansar-Ramtek Road ...	4,329	4-A	1,966	
					71,413		1,35,998	
			10	*Kamptee-Dygaon Road. Length 8 miles*—	...	9	1,873	
				Total Nagpur District ...	2,56,874		3,21,950	
NAGPUR.—(*Contd.*)	NAGPUR.—(*Contd.*)	WARDHA.	1	*Wardha-Paunar Road—5 miles*—				
				Raising in class	7,814	1	7,917	
			2	*Pulgaon-Arvi Road—22 miles*—				
				Raising in class 8 miles ...	8,684	2	2,897	
			3	*Arvi-Ashti Road—15 miles*—				
				Raising in class	67,207	3	62,010	
				Total Wardha District ...	83,705		72,824	
NAGPUR.—(*Contd.*)	NAGPUR.—(*Contd.*)	CHANDA.	1	*Antagarh-Rajnandgaon Road*—				
				14 miles construction ...	...	1	9,401	*Vide* Item No. 2, Chhattisgarh State Roads Division, Raipur District.
				Carried over ...	...		9 401	

Appendix A to Famine Report, Public Works Department Section.—(Contd.)

STATEMENT B.—(Contd.)

Civil Division.	Public Works Division.	District.	Item No.	Name of work.	Amount of estimate as sanctioned at ordinary P. W. D. rates.	Charge Number.	Total expenditure from commencement.	Remarks.
					Rs.		Rs.	
Nagpur.—(Contd.)	Nagpur.—(Concld.)	Chanda.—(Concld.)		Brought forward ...	...		9,401	
			2	*Warora-Patala-Wun Road—*				
				Warora to Patala—8 miles, raising in class.	10,680	2	1,895	
			3	*Chanda-Sironcha Road—*				
				Section I, Chanda to Kotari—18 miles, raising in class.	4,085	3	4,283	
			4	*Mul-Garchiroli Road—*				
				Raising in class—24 miles ...	1,245	4	1,244	
			5	*Warora-Chimur Road, 32 miles—*				
				Raising in class ...	288	5	219	
				Total Chanda District ...	16,298		17,042	
Nagpur—(Contd.)	Bhandara Independent Executive Charge.	Bhandara.	1	*Tumsar-Rampaili Road—*				*Work remaining to be done :—* Rs.
				(i) Raising in class—27 miles ...	1,16,936	1	2,48,671	Completing road, 22,930
				(ii) Tumsar-Dowhali Road. Annual repairs.	268	2	...	
				(iii) Tumsar-Dowhali Road. Collection of metal and moorum.	3,695		4,073	
					1,20,899		2,52,744	
			2	*Amgaon-Lanji Road—*				
				Raising in class 1⅞ mile. ...	12,130	3	16,232	Do. do. 3,262
			3	*Gondia-Arjuni-Road..Length 28 miles—*				
				(i) Construction as Class I. ...	1,39,423	4		Do. do. 65,050
				(ii) Eastern Road. Collection and consolidation of metal—miles 71 to 73	3,239		1,91,698	
				(iii) Gondia-Pulchur Road. Annual repairs.	405	5		
					1,43,067		1,91,698	
			4	*Amgaon-Satgaon Road. Length 7⅞ miles—*				
				(i) Construction as Class I ...	36,165	6	57,382	Do. do. 21,387
				Amgaon Railway Feeder Road—				
				(ii) Annual repairs	180	6	143	
				(iii) Metal and moorum collection ...	1,062		1,112	
					37,407		58,637	
			5	*Kyelanji-Tirora Road—*				
				Raising in class, 16 miles ...	5,481	7	4,821	
				Carried over ...	3,18,984		5,24,132	

Appendix A to Famine Report, Public Works Department Section.—(Contd.)

STATEMENT B.—(Contd.)

Civil Division.	Public Works Division.	District.	Item No.	Name of work.	Amount of estimate as sanctioned at ordinary P. W. D. rates.	Charge Number.	Total expenditure from commencement.	Remarks.
					Rs.		Rs.	
				Brought forward ...	3 18,984		5,24,132	
			6	*Gondia-Balaghat Road—*				
				(i) Collection and consolidation of metal—12 miles.	11,212	8	28,628	
				(ii) Collection and consolidation. Annual repairs.	990		210	
					12,202		28,838	
			7	*Chulbund-Arjuni Section of Eastern Road—*				
				(i) Collection and consolidation of metal and moorum for renewals on miles 61—71.	10,467	9	12,771	
				(ii) General repairs to Saongi Inspection Bungalow.	1,576			
					12,043		12,771	
			8	*Powni-Bhewapur Road—*				
				Survey ...	480	...	298	
			9	*Bhandara Station Roads and 5 miles round—*				*Work remaining to be done:—* Rs. Completing road 6,544
				(i) Circuit Road. Collection and consolidation.	7,711	11	39,683	
				(ii) Railway Feeder Road. Collection and consolidation.	9,423		10,570	
				(iii) Do. Annual repairs ...	1,100		191	
				(iv) Chord Line, Collection and consolidation.	1,410		1,274	
				(v) Chord Line. Annual repairs ...	150			
				(vi) Eastern Road, miles 32—44. Collection and consolidation ...	9,494		1,192	
				(vii) Eastern Road. Annual repairs ...	1,675		153	
				Improving and cleaning the compounds, &c. of Civil Buildings, Bhandara.	933		1,190	
				Total ...	31,896		54,253	
				Total Bhandara District ...	3,75,605		6 20,292	
Nagpur.—(Contd.)	Bhandara Independent Executive Charge.—(Contd.)	Bhandara.—(Concld.)						

Appendix A to Famine Report, Public Works Department Section.—(Contd.)

STATEMENT B.—(Contd.)

Civil Division.	Public Works Division.	District.	Item No.	Name of work.	Amount of estimate as sanctioned at ordinary P. W. D. rates.	Charge Number.	Total expenditure from commencement.	REMARKS.
					Rs.		Rs.	
NAGPUR.—(Contd.)	BHANDARA INDEPENDENT EXECUTIVE CHARGE.—(Contd.)	BALAGHAT.	1	*Lanji-Balaghat Road. Length 32 miles—*	1,81,567	9 & 10	1,71,541	*Work remaining to be done :—* Rs. Earthwork formation. 3,500; Moorum collection. 22,000; Consolidation... 3,000; Bridging nalas, 8,000; Metal collection. 15,000; Consolidation... 6,500; Mile stones ... 900; Total ... 58,900
			2	*Gondia-Balaghat Road—*				
				Collection and consolidation of metal for renewals in the section from Balaghat to border, 15 miles.	23,003	11	25,743	
			3	*Amgaon-Lanji Road. Length 17 miles—*				
				Constructing section from Langi to border, 14 miles.	79,940	5&5(*a*)	2,37,485	*Work remainting to be done :—* Rs. Bridges and culverts. 6,000; Moorum collection. 8,000; Moorum consolidation. 2,000; Metal collection. 5,000; Metal consolidation. 3,000; Temporary bridge over Bagnadi. 1,500; Total ... 25,500
			4	*Rampaili-Lalbarra Road. Length 20 miles—*				
				Construction ...	50,952 40,852 91,804	3 & 4	2,31,576	*1st section work remaining to be done :—* Rs. 16,500. 2nd Section— Bridges and culverts. 4,000; Moorum collection. 2,000; Moorum consolidation. 300; Metal collection. 2,500; Consolidation ... 1,500; Mile stones and miscellaneous. 1,700; Total ... 12,000
			5	*Waraseoni-Katangi Road. Length 16 miles—*				
				Raising in class ...	86,196	7	1,03,831	*Work remaining to be done :—* Rs. Earthwork ... 2,669; Moorum collection and consolidation. 17,270; Metal collection and consolidation. 19,807; Bridges and causeways. 10,042; Miscellaneous, Land, &c, 3,494; Total ... 53,282
			6	*Waraseoni-Balaghat Road. Length 12 miles—*				
				Raising in class ...	...	8	104	Rs. *Nala crossings 6,000; Moorum collection. 2,500; Moorum consolidation. 500; Metal collection 4,000; Metal consolidation. 2,000; Mile stones, 1,500 boundary stones and land compensation. Total ... 16,500
				Carried over ...	4,62,510		7,70,280	

Appendix A to Famine Report, Public Works Department Section.—(Contd.)

STATEMENT B.—(Contd.)

Civil Division.	Public Works Division.	District.	Item No.	Name of work.	Amount of estimate as sanctioned at ordinary P. W. D. rates.	Charge Number.	Total expenditure from commencement.	REMARKS.
					Rs.		Rs.	
				Brought forward ...	4,62,510		7,70,280	
			7	*Balaghat-Baihar Road—*				
				(1) Raising in class, 1st section, 8 miles ...	39,210	2	50,669	*Work remaining to be done:*— Rs. Bridges and culverts. 4,500; Moorum collection and consolidation. 2,000; Metal do. 8,000; Mile stones and miscellaneous. 1,500; Total ... 16,000
				(2) Raising in class 2nd section, 6 miles ...	2,19,252	12	65,611	*Work remaining to be done:*— Rs. Bridges and culverts. 40,000; Moorum collection and consolidation. 25,000; Metal do. 35,000; Earthwork ... 55,000; Mile stones and miscellaneous. 3,000; Totai ... 1,58,000
			8	*Balaghat-Baihar Road. Length 42 miles—*				
				Third section, 28 miles ...	93,032	1	55,653	*Work remaining to be done:*— Rs. Bridges and culverts. 10,000; Moorum collection and consolidation. 11,000; Metal do. ...20,000; Earthwork ...11,000; Mile stones and miscellanous. 3,000; Total ... 55,000
			9	*Tanks in Baihar Tahsil—*	27,236	6	35,148	Rs. 4,800 required to complete the tanks.
			10	*Lamtha-Baihar Road—*				
			11	Raising in class 10 miles ...	1,900	14	1,190	
NAGPUR.—(Concld.)	BHANDARA INDEPENDENT EXECUTIVE CHARGE.—(Contd.)	BALAGHAT.—(Concld.)		Total Balaghat District ...	8,43,140		9,78,551	

Appendix A to Famine Report, Public Works Department Section.—(Contd.)

STATEMENT B.—(Contd.)

Special Establishment.

Civil Division.	Public Works Division.	District.	Amount of estimate as sanctioned.	Total expenditure from commencement.	Remarks.
			Rs.	Rs.	
Nagpur.	Nagpur.	Nagpur District	9,816		
		Wardha do.	2,454		
		Chanda do.	.....		
		Total ...	12,270	1,64,194	
	Bhandara Independent Executive Charge.	Bhandara do.	38,541		
		Balaghat do.	48,485		
		Total ...	87,026		
		Grand Total ...	99,296	1,64,194	

Tools and Plant.

Civil Division.	Public Works Division.	Amount of estimate as sanctioned.	Total expenditure from commencement.	Remarks.
		Rs.	Rs.	
Nagpur.	Nagpur Division	*25,761	1,69,413	* Includes Camp equippage for Superintendent of Works.
	Bhandara Independent Executive Charge ...	97,221		
	Total ...	1,22,982	1,69,413	

Hutting, Conservancy and Medical.

Civil Division.	Public Works Division.	District.	Amount of estimate as sanctioned.	Total expenditure from commencement.	Remarks.
			Rs.	Rs.	
Nagpur.	Nagpur.	Nagpur District	8,856		
		Wardha do.	4,434		
		Chanda do.	.....		
			13,290	2,09,875	
	Bhandara Independent Executive Charge.	Bhandara do.	54,932		
		Balaghat do.	73,612		
			1,28,544		
		Total ...	1,41,834	2,09,875	

Appendix A to Famine Report, Public Works Department Section.—(Contd.)

STATEMENT B.—(Contd.)

Civil Division.	Public Works Division.	District.	Item No.	Name of Work.	Amount of estimate as sanctioned at ordinary P. W. D. rates.	Charge No.	Total expenditure from commencement.	Remarks.
					Rs.		Rs.	*Work remaining to be done* :—
			1	*Piparia-Sobhapur Road*—				Rs.
				Constructing 7 miles ...	1,711	1	27,104	Completing with culverts ... 14,000
				Metalling (revised estimate) ...	18,569			
					20,280		27,104	
			2	*Piparia-Sandia Road. Length* 15 *miles*— Completing by collecting and spreading bujri and metal where already broken.	58,658	1 (*a*)	80,713	Causeways ... 6,000 Extending Hatwas causeways ... 5,000 Pitching Khaperkhera causeways. 1,000 Total ... 12,000
			3	*Babai-Bagra Road. Length* 5 *miles*— ...	45,408	2	86,643*	
			4	*Itarsi-Dhar Road*—(*North-Western Road*) Collection of 9″ of metal for 20 miles (former estimate only for 8 miles).	55,625	3	96,733	Rs. *Consolidation ... 2 518 Moorum ... 1,982 Causeways ... 5.500 Total ... 10,000
				Annual repairs during 1897-98 ...	2,352		1,295	
				Collection of metal and moorum, 4½″ coat ...	2,695		...	
				...	60,672		98 028	
			5	*Harda-Handia Road*— Raising to class I ...	36,395	4	74,614	Rs. Consolidation ... 4 620 Earthen sides ... 900 Ghat cutting ... 500 Total ... 6,020
NERBUDDA.	HOSHANGABAD.	HOSHANGABAD.	6	*Semri-Barkatch Road. Length* 9 *miles*—	32,455	9 & 11	91,971	Rs. Providing paved causeways ... 4,200
			7	*Harda-Betul Road*— Timurni-Sodhalpur Dekhna section ...	36,846	10	1,06,349	Rs. Providing paved causeways ... 7,800 Providing paved causeways ... 6,250 Total ... 14.050
				Harda-Timurni section ...	10,956			
					47,802		1,06,349	
			8	*Bankheri-Umardha Road. Length* 12 *miles*— Constructing as class II. ...	8,684	12 (*a*)	32,198	Rs. Completing 2nd section ... 10,500 Causeways ... 3,500 Total ... 14,000
			9	*Old Bombay Road. Length* 100 *miles*— Raising Hatwas-Bankheri section ...	36,235	12 & 1	24 903†	
				Raising Bankheri-Dudi section, 7 miles ...	18,069	12	53.991‡	Rs. †Completing and raising 2nd Section Piparia-Bankeri road ... 20,000 ‡Completing with causeways ... 10,500 Rs. §Providing paved causeways ... 18,000
				Raising Jasalpur-Babai-Bhodwara, 14½ miles ...	21,032		56,585	
				Raising Semri-Sohagpur section, 11½ miles ...	29,342	9 & 11	68.264	
				Raising Dharamkundi-Hoshangabad section, 21 miles.	24,068	13	36,961§	
				Repairs to the Chakkar Road and portion of Old Bombay Road towards Jasalpur in the Hoshangabad District.	1,627		1.154	
					1,30.373		2,41.858	
			10	*Sobhapur-Bhatgaon Road. Length* 5 *miles*— Constructing 1st section, 4 miles, class II ...	5,624	9	4,886	Rs. Completing 2nd Section Piparia-Bhatgaon ... 5,000 Causeways ... 12,000 Total ... 17,000
			11	*Piparia-Pachmarhi Road*, 32 *miles*— Collection of 9″ coat of metal ...	60,433		1,15,572	
				Annual repairs to do. during 1897-98 ...	13,144	1, 2, 3 & 1-B	4,345	
				Total ...	73 577		1,19 917	
				Carried over ...	5,19,928		9,64,281	

Appendix A to Famine Report, Public Works Department Section.—(Contd.)

STATEMENT B.—(Contd.)

Civil Division.	Public Works Division.	District.	Item No.	Name of work.	Amount of Estimate as sanctioned at ordinary P. W. D. rates.	Charge No.	Total expenditure from commencement.	Remarks.
					Rs.		Rs.	
				Brought forward ...	5,19,928		9,64,281	
		Hoshangabad.—(Concld.)	12	*Hoshangabad-Itarsi Road. Length 11 miles*— Annual repairs during 1897-98 ...	1,153		455	
			13	*Civil Station Road, Hoshangabad. Length 1½ miles*— Annual repairs ...	229		221	
			14	Improving Plateau Road, Pachmarhi ...	5,619	13	6,464	
			15	Parade ground at Itarsi Police Station ...	86		...	
				Total Hoshangabad District ...	5,27,015		9,71,421	
		Nimar.		*Burhanpur Railway Station Road*— Collection of metal, 3 miles ...	2,812	2	2,946	
				Survey ...	59		...	
					2,871		2,946	
			1	*Harsud-Kalian Road*— Constructing and mooruming 1st section ...	26,688	1	1,643	*Work remaining to be done*:— Completing road. Rs. 15,500
			2	*Khandwa-Mohgat Road*— Raising to class I	10,485	3	10,574	Ditto ... 2,840
				Total Nimar District ...	40,044		15,163	
Nerbudda.—(Contd.)	Hoshangabad.—(Contd.)	Betul.	1	*Dhar-Betul (North Western) Road*— Collection of 9" coat for 38 miles ...	80,045	1	75,928	
				Annual repairs during 1897-98 ...	6,964		4,082	
					87,009		80,010	
			2	*Badnur-Elichpur Road*— Raising the Kheri-Jhallar section, 13 miles ...	85,883	2 (*b*)	1,28,086	Rs. Completing drainage 5,000
				Jhallar-Sawal-Mundha section, 18 miles ...	14,536	4		Completing road. 30,000
				Sawalmandha-Dhoha section, 10 miles ...	6,009	8		Ditto ... 28,000
					1,06,428		1,28,086	
			3	*Badnur to Dekhna via Kheri and Chicholi. Length 54 miles*— Raising the Badnur-Kheri section, 7 miles ...	24,269	2 (*a*) & 6	61,413	
				Kheri-Chicholi section, 15 miles ...	30,467	3 (*a*)		
				Chicholi-Chirapatta section, 15 miles ...	46,111			
				Chirapatta-Dekhna section, 12 miles ...	5,826	3 (*b*)		Completing road. 50,000
					1,06,673		61,413	
			4	*Betul-Multai Road and extension*—				
				(i) Annual repairs during 1897-98 ...	2,577	7	2,004	
				(ii) Raising in class, Road Multai to Betul border towards Nagpur.	26,032		14,056	
					28,609		16,060	
				Badnur Civil Station Road—				
				Annual repairs during 1897-98 ...	170		4	
				Total Betul District ..	3,28,889		2,85,573	

Appendix A to Famine Report, Public Work Department Section.—(Contd.)

STATEMENT B.—(Contd.)

Civil Division.	Public Work Division.	District.	Item No.	Name of Work.	Amount of estimate as sanctioned at ordinary P. W. D. rates.	Charge No.	Total expenditure from commencement.	Remarks.
					Rs.		Rs.	
Nerbudda.	Narsinghpur Independent Executive Charge.	Narsinghpur.		*Saugor-Kareli Road—* Collection of metal for renewals and repairs ...	3,665	5	17,415	*Work remaining to be done.* Rs.
			1	*Gadarwara-Sainkhera Road. Length 13 miles* ...	19,451	1	84,140	Road Dams ... 1,500
			2	*Narsinghpur-Sankal Road. Length 15 miles—*	73,706	2	77,044	Do. ... 2,500.
			3	*Sankal to Chota-Chhindwara Road. Length 10 miles—*	...	...	...	
			4	*Narsinghpur-Lakhnadon Road. Length 26 miles—* Metal collection, 9" on whole 26 miles ...	58,598	3	69,635	Completing road... 2,500
			5	*Barman-Tendukhera Road. Length 15 miles—* Metalling 9"	75,660	4	1,97,650	Do. do. ... 3,200
			6	*Gadarwara-Railway Station Road—* Raising ¾ mile to class I ...	3,299	1	...	Forms part of Item No. 1, above.
				Collecting 9" coat of kanker for 1¾ miles ...	2,783		...	
					6,082		...	
			7	*Babai-Barha Road. Length 7 miles—*	38,022	9	47,744	Do. do. ... 9,000.
			8	*Old Bombay Road—* Raising and metalling 63 miles ...	2,26,370	6, 7 & 10	1,05,284	Completing road Narsinghpur-Kareli Section. 8,000 Do. Kareli-Panari Section. 500.
			9	*Narsinghpur-Chhindwara Road—* 1st section, Singhpur to Kodari, 12 miles ...	88,753		95,445	Completing 1st Section. 50,000 Do. 2nd Section. 76,000
				2nd do., Kodari to Harrai, 12 miles ...	1,44,331	8	34,742	Do. 3rd do. 1,40,000.
				3rd do., Harrai to Khapa, 16 miles ...	1,45,487			
				Survey	2,451		...	
			10		3,81,022		1,30,187	
				Total Narsinghpur District ...	8,82,576		7,29,099	
		Pagara Jagir, Chhindwara.	1	*Mutkuli-Chhindwara Road. Length 46 miles—*		5-A		
				Collection of metal ...	20,762	5-B & 7	1,33,677	Completing road... 27,540
				Raising 2 miles and collection of 6" coat of metal for 40 miles ...	44,661			
				Annual repair during 1897-98 ...	3,750		1,043	
				Consolidation of metal and moorum (moorum soling and metal consolidation and earthen sides, 30 miles).	14,612		...	
					83,785		1,34,720	
		Chhindwara.	2	*Pachmarhi Mahadeo Road—* Annual repairs during 1897-98 ..	450		290	
			3	*Circular and Station Roads, Pachmarhi—* Annual repairs	1,488		1,017	
			4	*Narsinghpur-Chhindwara Road—* 2 sections, Chhindwara to Khapa (starting from Singori towards Narsinghpur). Constructing 4th Section, Rs. 68,575 " 5th " " 67,265	1,35,840	1, 2 & 8-A	1,73,995	Completing 4th Section ... 65,000
			5	*Chhindwara-Belgaon-Mutkuli Road—* Raising to class I Road dam	840	5-A, 5-B & 7	840	
				Total Chhindwara District ...	2,22,403		3,10,862	

Appendix A to Famine Report, Public Works Department Section.—(Contd.)

STATEMENT B.—(Contd.)

Special Establishment.

Civil Division.	Public Works Division.	District.	Amount of estimate as sanctioned at ordinary P. W. D. rates.	Total expenditure from commencement.	Remarks.
			Rs.	Rs.	
NERBUDDA.	HOSHANGABAD.	Hoshangabad District ...	42,121		
		Nimar do. ...	210		
		Betul do. ...	8,657		
			50,988	1,46,197	
	NARSINGHPUR INDEPENDENT EXECUTIVE CHARGE.	Narsinghpur do. ...	34,550		
		Chhindwara do. ...	5,996		
			40,546		
		Total Nerbudda Civil Division ...	91,534	1,46,197	

Tools and Plant.

Civil Division.	Public Works Division.	Amount of estimate as sanctioned at ordinary P. W. D. rates.	Total expenditure from commencement.	Remarks.
		Rs.	Rs.	
NERBUDDA.	Hoshangabad and Narsinghpur Independent Executive Charge.	3,08,386	3,21,273	
	Total Nerbudda Civil Division ...	3,08,386	3,21,273	

Hutting, Conservancy and Medical.

Civil Division.	Public Works Division.	District.	Amount of estimate as sanctioned at ordinary P. W. D. rates.	Total expenditure from commencement.	Remarks.
			Rs.	Rs.	
NERBUDDA.	HOSHANGABAD	Hoshangabad District ...	2,59,003	...	
		Nimar do. ...	1,339		
		Betul do. ...	25,260		
			2,85,602	4,91,134	
	NARSINGHPUR INDEPENDENT EXECUTIVE CHARGE.	Narsinghpur do. ...	...		
		Chhindwara do. ...	23,393		
			23,393		
		Total ...	3,08,995	4,91,134	

Appendix A to Famine Report, Public Works Department Section.—(Contd.)

STATEMENT B.—(Contd.)

Civil Division.	Public Works Division.	District.	Item No.	Name of Work.	Amount of estimate as sanctioned at ordinary P. W. D. rates.	Charge. No.	Total expenditure from commencement.	Remarks.
					Rs.		Rs.	*Work remaining to be done*:— Rs.
Chhattisgarh.	Eastern.	Raipur.	1	*Bhatapara-Laun Road*—				
				Metalling from Laun to border, 16 miles.	30,085	11	13,303	Completing Road ... 21,800
			2	*Karora-Baloda Road*—	35,577	7	48,527	Do. do. ... 14,400
				Survey	270	...	108	
					35,847		48,635	
			3	*Laun-Sarangarh Road*—				
				(i) Laun to border, constructing, 8 miles (Laun-Katangi section).	51,917	8	37,025	Do. do. ... 28,800
				Survey	214	...	218	
					52,131		37,243	
			4	*Tilda-Simga Road*—				
				Raising in class, 9 miles ...	16,567	10	32,525	Do. do. ... 5,800
			5	*Simga-Kawardha Road*—				
				Khalsa section, 24 miles ...	1,34,817	1 & 1a	1,62,520	Do. do. ... 92,350
				Survey	686	...	223	
					1,35,503		1,62,743	
			6	*Tilda-Sirpur Road*—				
				1st section, 31¼ miles ..	47,772			
				2nd ,, 16¼ miles ...	56,422	2	1,16,072	Do. do. ... 46,900 Do. do. ... 69 900
					1,04,194			
			7	*Deorbija-Bemetara Section, Drug-Dhamda Road*				
				Constructing 16 miles ...	45,378	3	13,658	Do. do. ... 38,355
			8	*Kumhari-Patharia Road*—				
				13 miles construction ...	20,772	13	20,375	Do do. ... 60 000
				Survey	353	...	...	
					21,125		20,375	
			9	*Raipur-Kharora Road*—				
				Raising in class, 23 miles ...	42,212	21	16,737	Do. do. ... 37 900
			10	*Raipur-Arang Road*—				
				Metalling 23 miles ...	42,791	22	15,926	Do. do. ... 29 400
			11	*Raipur-Dhamtari Road*—				
				Feeder line earthwork, 7½ miles ..	11,451	20	17,144	
				Carried over ...	5,37,284		4,94,361	

Appendix A to Famine Report, Public Works Department Section.—(Contd.)

STATEMENT B.—(Contd.)

Civil Division.	Public Works Division.	District.	Item No.	Name of Work.	Amount of estimate as sanctioned at ordinary P. W. D. rates.	Charge No.	Total expenditure from commencement.	REMARKS.
					Rs.		Rs.	
				Brought forward ...	5,37,284	...	4,94,361	*Work remaining to be done:—*
			12	*Drug-Balod Road—*				Rs.
				Construction, 35 miles ...	1,47,889	...	3,23,922	Completing road ...1,14,800
				Section (i) Drug-Chandkeri ...	...	16	...	
				Do. (ii) Chandkeri-Arunda.	...	4	...	
				Do. (ii) Arunda-Gunderdehi.	...	5	...	
				Gunderdehi-Bata-gaon.	...	18	...	
				Batagaon-Balod ...	...	6	...	
			13	*Drug-Dhamda Road—*				
				Raising in class, 20 miles ...	40,821	12	3,847	Do. do. ... 29,900
			14	*Dhamda-Deorbija Road—*				Do do. Dhamda-Deokar ... 30,950
				Section Dhamda-Deokar, 8 miles construction.	91,926	15	1,11,439	Do do. Deokar-Deorbija... 30,425
								61,375
			15	*Dhamda-Gandai Road—*				
				Construction, 22 miles ...	70,118	9 & 17	68,721	Do. do. ... 95,900
			16	*Dongargarh-Pandaria Road—*				
				Construction, 20 miles ...	13,315	19	39,882	Do. do. ... 64,600
				Total Raipur District ...	9,01,353	...	10,42,172	
CHHATTISGARH.—(Contd.)	EASTERN.—(Contd.)	BILASPUR.	1	*Bilaspur-Mungeli Road. Length 22 miles—*				
				Raising in class (i) Katakoni to Bareli section, 11 miles (miles 9 to 20).	1,02,975	2 & 12	1,84,631	Do. do. ... 66,400
			2	*Bilaspur Railway Station Road. Length 3 miles—*				
				Construction ...	21,394	3	18,200	Do. do. ... 4,500
				Survey ...	75	...	4	
					21,469	...	18,204	
			3	*Bilaspur-Masturi Road. Length 10 miles—*				
				Raising in class ...	28,563	9	55,257	Do. do. ... 20,950
				Survey ...	497	...	94	
					29,060	...	55,351	
			4	*Akaltara-Pamgarh Road. Length 11 miles—*				
				Raising in class ...	25,591	11	30,486	Do. do. ... 32,850
			5	*Akaltara-Baloda Road. Length 9 miles—*				
				Raising in class ...	21,837	8	43,524	Do. do. ... 16,250
			6	*Champa-Railway Station to Champa village and through village, total length 3 miles—*				
				Raising in class ...	7,998	15	19,191	Do. do. ... 3,725
				Carried over ...	2,08,930	...	3,51,387	

Appendix A to Famine Report, Public Works Department Section.—(Contd.)

STATEMENT B.—(Contd.)

Civil Division.	Public Works Division.	District.	Item No.	Name of work.	Amount of estimate as sanctioned at ordinary P. W. D. rates.	Charge No.	Total expenditure from commencement.	REMARKS.
					Rs.		Rs.	
CHHATTISGARH.—(Contd.)	EASTERN.—(Contd.)	BILASPUR.—(Concld.)		Brought forward ...	2,08,930		3,51,387	
			7	*Bhatapara-Nandghat Road. Length 11 miles—*				*Work remaining to be done:—* Rs.
				Construction ...	49,364	1	87,568	Completing road ... 3,100
			8	*Nandghat-Mungeli Road. Length 21 miles—*				
				Raising in class ...	1,30,425	5	77,314	Do. do. ... 58,000
				Survey	200			
					1,30,625			
			9	*Bhatapara-Laun Road. Length 27 miles—*				
				Metalling the portion from Bhatapara to border, 11 miles.	14,835	10	34,476	Do. do. ... 15,900
			10	*Kotah to Lormi and on to border of Pandaria. Length 23 miles—*				
				Construction ...	...	...		
				(i) Section, 11 miles (miles 1 to 11).	1,00,008	4 & 13	1,38,130	Do. 1st Section.. 26,910 Do. 2nd do. ... 51,615
				(ii) ,, (miles 12 to 22).				
				Survey	666	...	377	
			11	*Bilaspur-Ratanpur Road. Length 16 miles—*				
				Raising in class ...	60,691	14	41,691	Do. road ... 57,440
			12	*Laun-Sarangarh Road—*				See Item No. 3, Northern Sub-Division, Raipur District, estimate sanctioned.
				Constructing				
				(i) Laun to Katangi section, 3 miles.	46,769	7	9,236	*Work remaining to be done:—* Rs. Completing road ... 15,825 Do. do. ... 58,700
				(ii) Katangi to Pauni section, 12 miles.		16		
				Survey	765	...		
				Total Bilaspur District ...	6,12,653		7,40,179	
		SAMBALPUR.	1	*Dabra-Kharsia Road—*				Rs.
				Construction, 16 miles ...	39,276	1	14,562	Do. do. ... 27,000
				Survey	260 304	... ...	274	
				Total Sambalpur District ...	39,840		14,836	

Appendix A to Famine Report, Public Works Department Section.—(Contd.)

STATEMENT B.—(Contd.)

Special Establishment.

Civil Division.	Public Works Division.	District.	Amount of estimate as sanctioned at ordinary P. W. D. rates.	Total expenditure from commencement.	Remarks.
			Rs.	Rs.	
Chhattisgarh.	Eastern.	Raipur	60,300	1,15,692	
		Bilaspur	25,170		
		Sambalpur	1,400		
		Total ...	86,870	1,15,692	

Tools and Plant.

Civil Division.	Public Works Division.	Amount of estimate as sanctioned at ordinary P. W. D. rates.	Total expenditure from commencement.	Remarks.
		Rs.	Rs.	
Chhattisgarh.	Eastern Division	1,30,384	1,18,125	
	Total ...	1,30,384	1,18,125	

Hutting, Conservancy and Medical.

Civil Division.	Public Works Division.	District.	Amount of estimate as sanctioned at ordinary P. W. D. rates.	Total expenditure from commencement.	Remarks.
			Rs.	Rs.	
Chhattisgarh.	Eastern.	Raipur	2,18,000	3,92,691	
		Bilaspur	1,40,000		
		Sambalpur	4,000		
		Total ...	3,62,000	3,92,691	

Appendix A to Famine Report, Public Works Department Section.—(Contd.)

STATEMENT B.—(Contd.)

Civil Division.	Public Works Division.	District.	Item No.	Name of Work.	Amount of estimate as sanctioned at ordinary P. W. D. rates.	Charge No.	Total expenditure from commencement.	Remarks.
				PENDRA ZAMINDARI.				
					Rs.		Rs.	
			1	Pendra-Parasi Road, 22 miles, to be constructed as a class II road.	52,675	1	34,000	Work begun and expenditure being met by a grant from the P. W. D. Famine Fund.
			2	Tippan Tank embankment construction near Pendra Village.				Works begun and expenditure being met by grants from Estate Funds up to the extent of the current year's budget provision. Grants from Famine Funds may be required later on.
			3	"Pendra Road" Station to Amarkantak Road, 20 miles; constructing as class II.	...	...	...	
			4	Constructing roads in Gowrila Village at "Pendra Road" Station; constructing road in Pendra Town as class II, 2 miles.				
			5	Constructing a section of the Mandla-Bilaspur Road lying in the Kawardha State.	14,069	...	...	Rupees 3,000 from Kawardha State Funds.
				PANDARIA ZAMINDARI.				
			6	Pandaria-Lormi (Kota) Road, section in Pandaria Zamindari, 15 miles; constructing as class II.	13,431 18,359	... ...	41,000	Expenditure being met by grants from Estate Funds. A grant from Famine Funds has also been given.
					31,790	3	75,000	
			7	Phulwari Tank ...				Grant will be given from the Estate Funds. Being constructed on the piece-work system at the request of the Deputy Commissioner.
			8	Pulmi Tank ...				
			9	Kodoa Tank ...	...	...	...	
			10	Jangalpur Tank ...				
				Total Bilaspur District ...	98,534	...	...	
			1	Chowki-Dongargaon Road, 17 miles; constructing as class II road.	18,690	7	...	Paid by Estate, Rs. 1,901. Further grants from Estate Funds are not available; grant from Famine Funds will be necessary.
			2	Chowki Tank	...	...	...	
			3	Chauki-Mohli Road, 15 miles; to be constructed as class II road.	...	...	...	Grant from Famine Funds will be needed as Estate Funds are not available.
				Total Chanda District ...	18,690	...	...	

Appendix A to Famine Report, Public Works Department Section.—(Contd.)

STATEMENT B.—(Contd.)

Civil Division.	Public Works Division.	District.	Item No.	Name of Work.	Amount of estimate as sanctioned at ordinary P. W. D. rates.	Charge No.	Total Expenditure from commencement.	Remarks.
					Rs.		Rs.	
Chhattisgarh States Roads.—(Concld.)	Chhattisgarh States Roads.—(Concld.)	Raipur.	1	Dongargarh-Pandaria Road, section in the Raipur District, 20 miles, raising to class II.	...	...	...	
			2	Second section, Nandgaon-Antagarh Road, from Ranitarai to Lohara, 16 miles in the Raipur District. Constructing as class II.	31,220	7	32,783	
			3	Third section, Nandgaon-Antagarh Road, from Lohara to Kusam-Kassa, 12 miles in the Raipur District. Constructing as class II.	...	...	...	
			4	Fourth section, Nandgaon-Antagarh Road, from Kusam-Kassa to the Kanker border near Lohara, 20 miles in the Raipur District. Constructing as class II.	...	...	...	
				Total Raipur District ...	31,220	...	32,783	

Appendix A to Famine Report, Public Works Department Section.—(Contd.)

STATEMENT B.—(Contd.)

Special Establishment.

District.	Amount of estimate as sanctioned.	Total funds allotted from commencement from Famine Funds, Imperial.	Remarks.
	Rs.	Rs.	
Temporary estimate for Famine-relief Works in the Chhattisgarh States Roads Division.	25,200	...	

Tools and Plant.

	Rs.	Rs.	
Obtaining Tools and Plant for the use of Famine-relief Works in the Chhattisgarh States Roads Division.	26,964	...	

Hutting, Conservancy and Medical.

	Rs.	Rs.	
Hutting, &c., for Famine-relief Works in the Chhattisgarh States Roads Division.	28,000	...	

General Abstract of Statement B.

Civil Division.	Public Works Division.		District.	Amount of estimate as sanctioned at ordinary P. W.D. rates.	Total expenditure from commencement.	Remarks.
			Works.	Rs.	Rs.	
Jubbulpore.	Saugor Independant Ex. Charge.	Jubbulpore.	Jubbulpore	3,34,169	5,80,050	
			Mandla	1,84,240	2,76,689	
			Seoni	1,95,765	1,96,507	
			Saugor	4,56,222	5,30,786	
			Damoh	4,00,347	3,56,000	
			Total Jubbulpore Civil Division ...	15,70,743	19,40,032	
Nagpur.	Bhandara Independant Ex. Charge.	Nagpur.	Nagpur	2,56,874	3,21,950	
			Wardha	83,705	72,824	
			Chanda	16,298	17,042	
			Bhandara	3,75,605	6,20,292	
			Balaghat	8,43,140	9,78,551	
			Total Nagpur Civil Division ...	15,75,622	20,10,659	
Nerbudda.	Narsinghpur Independant Ex. Charge.	Hoshangabad.	Hoshangabad	5,27,015	9,71,421	
			Nimar	40,044	15,163	
			Betul	3,28,889	2,85,573	
			Narsinghpur	8,82,576	7,29,099	
			Chhindwara	2,22,403	3,10,862	
			Total Nerbudda Civil Division ...	20,00,927	23,12,118	
Chhattisgarh.	Chhattisgarh States Roads.	Eastern.	Raipur	9,01,353	10,42,172	
			Bilaspur	6,12,653	7,40,179	
			Sambalpur	39,840	14,836	
			Total Chhattisgarh ...	15,53,846	17,97,187	
Chhattisgarh States Roads P. W. Division.			Bilaspur	98,534	75,000	
			Chanda	18,690	...	
			Raipur	31,220	32,783	
			Total Chhattisgarh States Roads Division ...	1,48,444	1,07,783	
			Grand Total Works ...	68,49,582	81,67,779	

General Abstract of Statement B.—(Concld.)

	Amount of estimate as sanctioned at ordinary P. W. D rates.	Total expenditure from commencement.	Remarks.
Special Establishment.	Rs.	Rs.	
Jubbulpore Civil Division ...	1,50,391	1,60,048	
Nagpur Civil Division	99,296	1,64,194	
Nerbudda Civil Division	91,534	1,46,197	
Chhattisgarh Civil Division	86,870	1,15,692	
Chhattisgarh States Roads Division ...	25,200	...	
Total Special Establishment ...	4,53,291	5,86,131	
Tools and Plant.			
Jubbulpore Civil Division	1,58,056	1,63,282	
Nagpur Civil Division	1,22,982	1,69,413	
Nerbudda Civil Division	3,08,386	3,21,273	
Chhattisgarh Civil Division	1,30,384	1,18,125	
Chhattisgarh States Roads Division ...	26,964	...	
Total Tools and Plant ...	* 7,46,772	7,72,093	
Hutting, Conservancy and Medical.			
Jubbulpore Civil Division	1,73,170	2,08,663	
Nagpur Civil Division	1,41,834	2,09,875	
Nerbudda Civil Division	3,08,995	4,91,134	
Chhattisgarh Civil Division	3,62,000	3,92,691	
Chhattisgarh States Roads Division ...	28,000	...	
Total Hutting, Conservancy and Medical ...	10,13,999	13,02,363	
Abstract.			
Works	68,49,582	81,67,779	
Special Establishment	4,53,291	5,86,131	
Tools and Plant	7,46,772	7,72,093	
Hutting, Conservancy and Medical ...	10,13,999	13,02,363	
Grand Total ...	90,63,644	1,08,28,366*	

H. RAINIER,

Examiner, Public Works Accounts,

Central Provinces.

The 15th March 1898.

*N. B.—

	Rs.
Total Expenditure as above	1,08,28,366
Expenditure by the Civil Department prior to handing over to the Public Works Department, *vide* Appendix D, column 5.	1,48,357
Expenditure by the Public Works Department	1,06,80,009 or in round numbers 107 lakhs of rupees.

Appendix B to Public Works Department Section.

Average quantity of Earthwork and Number of Day-units per Mile on New Roads.

Description of roads and name of district in which situated.	Average Earthwork per mile.		Average number of day-units per mile.		Remarks.
	Estimated.	Actual.	Estimated.	Actual.	
I.—New Ghat Roads.	Cft.	Cft.	No.	No.	
Jubbulpore District ...	352,000	431,500	...	75,000	
Mandla do. ...	240,000	355,300	...	61,000	* Average quantity of earthwork done per day-unit of all classes for the whole of Central Provinces = Cft. 14
Average ...	296,000	393,400	...	68,000	
II.—New Roads in hard muram soil with occasional boulders.					
Damoh District ...	180,000	282,000	...	39,500	
III.—New Roads, Ordinary.					
Seoni District ...	...	180,000	...	14,000	Average quantity of earthwork per mile for III "New roads, Ordinary" :— average of 27 estimates = 268,316
Saugor do. ...	...	110,000	...	18,000	
Nagpur do. ...	...	200,000	...	11,200	Estimated number of day-units per mile = $\frac{268,316}{14}$ = 19,200 nearly.
Narsinghpur do. ...	...	520,000	...	52,000	
Chhindwara do. ...	...	116,000	...	25,000	
Hoshangabad do. ...	...	206,000	...	30,689	
Do. do. ...	...	231,300	...	50,240	
Do. do. ...	...	177,562	...	34,888	
Chhattisgrh States Roads Division ...	...	195,000	...	12,200	
Average ...	* 268,316	215,096	* 19,165	27,600	

Appendix C to Public Works Department Section.

Average quantity of Earthwork and Number of Day-units per Mile on Roads raised in Class.

District.	Average quantity of Earthwork per mile on Roads raised in Class.	Average number of Day-units relieved per Mile on Roads, raised in Class.	Remarks.
1	2	3	4
	Cubic feet.	No.	*N. B.*—Columns 2 and 3 give actual figures for 54 roads "Raised in Class" in the Central Provinces.
Jubbulpore	83,424	9,269	
Mandla	104,844	17,474	
Seoni	139,132	10,702	
Saugor	108,454	1,205	
Damoh	137,813	22,969	
Nagpur	20,016	662	
Wardha	173,540	11,569	
Chanda	.....	.....	
Bhandara	161,113	10,741	
Balaghat	254,766	23,161	
Hoshangabad	294,789	21,056	
Nimar	46,002	2,706	
Betul	201,478	13,432	
Narsinghpur	287,095	31,899	
Chhindwara	160,593	11,471	
Raipur	206,711	18,792	
Bilaspur	158,073	13,173	
Sambalpur	193,691	12,106	
Chhattisgarh States Roads Division ...	203,141	8,832	
Total ...	2,934,675	241,219	
Average ...	163,038	13,400	

APPENDIX D.

Appendix D to Public Works

Abstract Statement showing Expenditure booked by Examiner to end of October 1897 as com-

Serial No.	Divisional Group.	Divisions and Groups of Divisions.	OUTLAY ON WORKS (WAGES AND GRATUITOUS RELIEF).				
			EXAMINER'S FIGURES.			Executive Engineers' figures.	Difference —less +more.
			Total expenditure.	Expenditure by Civil Department.	Expenditure by Public Works Department.		
1	2	3	4	5	6	7	8
			Rs.	Rs.	Rs.	Rs.	Rs.
1	Jubbulpore ...	Jubbulpore Division ...	...	...	...	10,24,763	...
2		Saugor do. ...	...	...	...	8,90,488	...
		Total Jubbulpore Group ...	18,94,940	29,562	18,65,378	19,15,251	+49,873
3	Nagpur ...	Nagpur Division ...	...	...	...	3,71,882	...
4		Bhandara do. ...	...	...	...	16,54,449	...
		Total Nagpur Group ...	17,88,986	46,059	17,42,927	20,26,331	+2,83,404
5	Hoshangabad..	Hoshangabad Division ...	...	...	...	12,84,888	...
6		Narsinghpur do. ...	...	...	...	9,08,612	...
		Total Hoshangabad Group ...	22,07,450	64,487	21,42,963	21,93,500	+50,537
7	...	Eastern Division ...	15,80,938	...	15,80,938	17,64,751	+1,83,813
8	...	Chhattisgarh States Roads Division.	81,954	8,249	73,705	1,36,751	+63,046
9	...	Examiner's Auxiliary Charges ...	...	...	...	...	...
		GRAND TOTAL ...	75,54,268	1,48,357	74,05,911	80,36,584	+6,30,673

Department Section.

pared with the Expenditure shown in Executive Engineers' Returns to end of December 1897.

OUTLAY ON SPECIAL ESTABLISHMENT, TOOLS, HUTTING, &c.			TOTAL.			Remarks.
Examiner's figures.	Executive Engineers' figures.	Difference —less +more.	Examiner's figures (P. W. D.)	Executive Engineers' figures.	Difference —less +more.	
9	10	11	12	13	14	15
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
...	3,02,398	...	...	13,27,161	...	(*a*) Represents present value of tools approximately.
...	2,33,234	...	...	11,23,722	...	(*b*) Includes liabilities not shown in Examiner's accounts.
						(*c*) Printing charges and charges on account of Superintendent of Works' Office Establishment, &c.
5,08,606	5,35,632	(*b*) +27,026	23,73,984	24,50,883	+76,899	(*d*) Includes expenditure from private funds.
...	57,391	...	...	4,29,273	...	*N. B.*— (1) The Examiner's figures are to end of October 1897.
...	2,85,483	...	...	19,39,932	...	(2) The Executive Engineers' figures are based on the expenditure as booked by them to end of December 1897, and include liabilities not shown in Examiner's books which are only complete up to October 1897.
445,844	3,42,874	(*a*)—1,02,970	21,88,771	23,69,205	+1,80,434	
...	4,68,473	...	...	17,53,361	...	
...	3,28,224	...	...	12,36,836	...	
9,10,781	7,96,697	(*a*)—1,14,084	30,53,744	29,90,197	—63,547	
4,96,789	5,39,804	(*b*) +43,015	20,77,727	23,04,555	+2,26,828	
...	36,706	+36,706	73,705	1,73,457	(*d*) +99,752	
29,011	...	(*c*) —29,011	29,011	...	—29,011	
23,91,031	22,51,713	—1,39,318	97,96,942	1,02,88,297	+4,91,355	

COUNTERSIGNED.

ELLIS LUND,

Examiner, Public Works Accounts,

Central Provinces.

The 15th February 1898.

R. MITRA,

Assistant Engineer,

On special duty.

The 4th February 1898.

Appendix E to Public Works Department Section.

Abstract Statement of Expenditure on Famine-relief Operations to end of December 1897.

Public Works Division.	Name of District.	Wages.	Gratuitous relief.	Special Establishment, &c.	Total.	Remarks.
1	2	3	4	5	6	7
		Rs.	Rs.	Rs.	Rs.	
1.—Jubbulpore.	Jubbulpore ...	5,06,601	66,384	1,57,254	7,30,239	These figures do not include expenditure by Civil Department. They are based on the expenditure booked by Executive Engineers to end of December 1897, and include liabilities not shown in Examiner's books, which are complete to end of October 1897 only.
	Mandla ...	2,17,975	41,457	95,227	3,54,659	
	Seoni ...	1,82,509	9,837	49,917	2,42,263	
	Total for Jubbulpore Public Works Division.	9 07,085	1,17,678	3,02,398	13,27,161	
2.—Saugor ...	Saugor	4,55 442	82,115	1,17,999	6,55,556	
	Damoh	2.85,872	67,059	1,15,235	4,68,166	
	Total for Saugor Public Works Division.	7,41,314	1,49,174	2,33,234	11,23,722	
3.—Nagpur ...	Nagpur ...	2,96,896	13,744	41,246	3,51,886	
	Wardha ...	53,939	1,748	16,145	71,832	
	Chanda ...	5,555	...	...	5,555	
	Total for Nagpur Public Works Division.	3,56,390	15,492	57,391	4,29,273	
4.—Bhandara...	Bhandara ...	6,60,635	72,948	1,16,135	8,49,718	
	Balaghat ...	8,22,812	98,054	1,69,348	10,90,214	
	Total for Bhandara Public Works Division.	14,83,447	1,71,002	2,85,483	19,39,932	
5.—Hoshangabad.	Hoshangabad ...	8,64,816	1,10,530	4,19,109	13,94,455	
	Nimar ...	12,682	1,541	4,949	19,172	
	Betul ...	2,62,724	32,595	44,415	3,39,734	
	Total for Hoshangabad Public Works Division. ...	11,40,222	1,44,666	4 68 473	17 53,361	
6.—Narsinghpur.	Narsinghpur ...	5,63,988	48,934	2,21,302	8,34 224	
	Chhindwara ...	2,84,120	11,570	1,06,922	4,02,612	
	Total for Narsinghpur Public Works Division.	8,48,108	60 504	3,28,224	12,36,836	
7.—Eastern Division.	Raipur ...	9,45,759	78,087	3,31,016	13,54,862	
	Bilaspur ...	6,78,665	47,678	2,03,596	9,29,939	
	Sambalpur ...	13,578	984	5,192	19,754	
	Total for Eastern Public Works Division.	16,38,002	1,26,749	5 39 804	23.04.555	
8. Chhattisgarh States Roads Division.	Chhattisgarh States Roads Division ...	1,26,769	9,982	36,706	1,73,457	
	Total for Chhattisgarh States Roads Public Works Division.	1,26,769	9,982	36,706	1,73,457	
	Total for Central Provinces...	72,41,337	7,95,247	22,51,713	1,02,88,297	

Countersigned.
E. LUND,
Examiner, Public Works Accounts,
Central Provinces.
The 15th February 1898.

R. MITRA,
Assistant Engineer,
On special duty.
The 4th February 1898.

APPENDIX F.

Appendix F.—(Statistical) to Public

Statistical Account of work done as arranged by Civil

PARTICULARS.		JUBBULPORE CIVIL DIVISION.								NAGPUR CIVIL DIVI-						
		Jubbulpore District.	Mandla District.	Seoni District.	Total Jubbulpore Public Works Division.	Saugor District.	Damoh District.	Total Saugor Public Works Division.	Total Jubbulpore Civil Division.	Nagpur District.	Wardha District.	Chanda District.	Total Nagpur Public Works Division.	Bhandara District.	Balaghat District.	Total Bhandara Public Works Division.
I.—AREA, POPULATION AND ATTENDANCE.																
1. Area of District ...	Sq. Miles.	3,948	5,056	3,198	12,202	4,007	2,831	6,838	19,040	3,832	2,428	10,749	17,009	3,068	3,164	7,132
2. Area affected ...	„	3,948	5,056	1,766	10,770	4,007	2,000	6,007	16,777	524	650	2,052	3,226	3,400	3,164	6,564
3. Population of District ...	Thousands	748	339	371	1,458	591	325	916	2,374	758	400	697	1,855	742	383	1,125
4. Population affected ...	„	748	339	200	1,287	591	200	791	2,078	243	70	104	417	630	383	1,013
5. Average number employed daily on Relief works.	„	41	14	8	63	28	26	54	117	17	3	...	20	23	42	6
6. Average duration of relief operations ...	Months.	7	9	8	8	7	6	7	8	5	6	...	6	9	7	
II.—RELIEF CHARGES.																
1. Total number of charges.	No.	20	6	5	31	13	10	23	54	11	1	...	12	9	12	
2. Average distance from charge to charge ...	Miles.	11	25	19	18	17	14	16	17	11	...	...	11	16	12	
3. Average number employed daily in each charge.	Thousands	2·0	2·3	1·5	2·0	2·2	2·6	2·4	2·1	1·5	2·7	...	1·6	2·6	3·5	
4. Average ratio of dependants to workers ...		1:5	1:4	1:5	1:5	1:5	1:5	1:5	1:5	1:5	1:5	...	1:5	1:7	1:5	
III.—EXPENDITURE.																
1. Wages ...	Lakhs of Rs.	5·1	2·2	1·8	9·1	4·6	2·8	7·4	16·5	3·0	0·5	0·06	3·6	6·6	8·2	
2. Gratuitous relief ...	„	0·7	0·4	0·1	1·2	0·8	0·7	1·5	2·7	0·1	0·02	...	0·2	0·7	1·0	
3. Miscellaneous, including Special Establishment, Tools, Hutting and Conservancy charges ...	„	1·6	0·9	0·5	3·0	1·2	1·2	2·3	5·3	0·4	0·2	...	0·5	1·2	1·7	
4. Total expenditure ...	„	7·3	3·5	2·4	13·3	6·6	4·7	11·2	24·5	3·5	0·7	0·06	4·3	8·5	10·9	19
5. Total number of day-units relieved ...	Millions.	8·5	3·8	1·8	14·1	5·9	4·7	10·5	24·6	2·5	0·5	...	2·9	6·3	8·8	15
6. Percentages of total outlay—																
Wages ...		69	61	75	68	69	61	66	67	84	76	...	83	77	75	7
Gratuitous relief ...		9	12	4	9	13	14	13	11	4	2	...	4	9	9	9
Miscellaneous ...		22	27	21	23	18	25	21	22	12	22	...	13	14	16	1
7. Expenditure per day-unit including all charges—																
Maximum ...	Pies.	18	19	28	28	39	28	39	39	96	28	...	96	48	96	9
Minimum ...	„	13	15	22	13	15	18	15	13	22	...	...	22	13	12	1
Average ...	„	16	18	24	18	22	19	21	19	27	28	...	28	28	24	2
8. Average expenditure per day-unit exclusive of miscellaneous charges ...	„	13	13	19	14	18	15	16	15	24	22	...	24	22	19	1
9. Average wages earned—																
Per worker ...	„	14	14	24	15	18	15	16	16	28	27	...	27	24	22	2
„ dependant ...	„	9	11	6	9	16	15	16	12	7	5	...	6	18	13	1

Works Department Section.

Divisions, Districts and Public Works Divisions.

SION.	NERBUDDA CIVIL DIVISION.								CHHATTISGARH CIVIL DIVISION.				FEUDATORIES AND ZAMINDARIS.	TOTALS AND AVERAGES FOR CENTRAL PROVINCES.
Total Nagpur Civil Division.	Hoshangabad District.	Nimar District.	Betul District.	Total Hoshangabad Public Works Division.	Narsinghpur District.	Chhindwara District.*	Total Narsinghpur Public Works Division.	Total Nerbudda Civil Division.	Raipur District.	Bilaspur District.	Sambalpur District.	Total Public Works Eastern and Civil Chhattisgarh Division.	Chhattisgarh States Roads Division.	
24,141	4,024	3,928	3,824	11,776	1,916	4,630	6,546	18,322	11,724	8,341	4,948	25,013	...	86,516
9,790	3,794	3,928	3,824	11,546	1,916	2,549	4,465	16,011	4,027	8,341	228	12,596	...	55,174
2,980	499	285	323	1,107	367	407	774	1,881	1,584	1,164	796	3,544	...	10,779
1,430	361	285	323	969	367	164	531	1,500	710	1,164	62	1,936	...	6,944
85	50	1	18	69	40	14	54	123	63	45	1	109	7	441
7	7	5	6	6	6	8	7	7	7	6	7	7	6	7
33	19	3	9	31	10	6	16	47	20	14	1	35	9	178
13	16	32	12	20	10	17	14	17	14	14	...	14	...	16
2·5	2·6	0·4	2·0	2·2	4·0	2·3	3·3	2·6	3·1	3·2	0·9	3·1	0·8	2·4
1:6	1:4	1:5	1:7	1:5	1:5	1:5	1:5	1:6	1:4	1:5	1:5	1:4	1:5	1:5
18·4	8·6	0·12	2·6	11·4	5·6	2·8	8·5	19·9	9·5	6·8	0·13	16·4	1·3	72·41
1·9	1·1	0·02	0·3	1·4	0·5	0·1	0·6	2·0	0·8	0·5	0·01	1·3	0·1	7·95
3·4	4·2	0.05	0·4	4·7	2·2	1·1	3·2	7·9	3·3	2·0	0·05	5·4	0·4	22·52
23·7	13·9	0·19	3·4	17·5	8·5	4·0	12·4	29·9	13·5	9·3	0·19	23·1	1·7	102·88
17·9	10·5	0·2	3·2	13·9	7·1	3·2	10·3	24·2	13·2	8·1	0·2	21·4	1·3	89·65
78	62	66	77	65	67	70	68	66	70	73	69	71	73	70
8	8	8	10	8	6	3	5	7	6	5	5	6	6	8
14	30	26	13	27	27	27	27	27	24	22	26	23	21	22
96	48	24	28	48	32	32	32	48	39	28	22	39	64	96
12	18	22	16	16	14	19	14	14	9	14	...	9	15	9
25	24	22	22	24	22	24	23	24	19	22	22	22	24	22
22	18	16	18	18	16	18	17	18	15	18	16	16	19	17
23	18	18	18	18	18	20	19	18	18	19	18	18	22	20
13	18	11	16	17	8	5	6	12	6	7	7	6	9	10

* This includes work done under the Hoshangabad Public Works Division in the Chhindwara District.

Appendix F.—(Statistical) to Public

Statistical Account of work done as arranged by Civil

PARTICULARS.		JUBBULPORE CIVIL DIVISION.								NAGPUR CIVIL DIVI-						
		Jubbulpore District.	Mandla District.	Seoni District.	Total Jubbulpore Public Works Division.	Saugor District.	Damoh District.	Total Saugor Public Works Division.	Total Jubbulpore Civil Division.	Nagpur District.	Wardha District.	Chanda District.	Total Nagpur Public Works Division.	Bhandara District.	Balaghat District.	Total Bhandara Public Works Division.
IV.—WORK DONE.																
1. PER DAY-UNIT OF ALL CLASSES.																
Earthwork—																
Maximum ...	Cft.	16	10	30	30	25	12	25	30	49	15	...	49	28	22	28
Minimum ...	,,	4	3	11	3	4	3	3	3	12	...	...	12	1	4	1
Average ...	,,	9	6	19	11	10	6	8	10	31	15	...	23	15	11	
Metal breaking—																
Maximum ...	,,	1·7	..	2·1	2·1	2·0	3·0	3·0	3·0	12	...	...	12·0	4·0	2·0	4
Minimum ...	,,	0·5	0·5	1·0	0·5	0·3	0·3	0·3	0·3	2·1	1·8	...	1·8	0·7	0·8	0
Average ...	,,	1·0	0·5	1·4	1·0	1·0	1·0	1·0	1·0	7·4	1·8	...	4·6	2·5	1·5	2
2. PER WORKER.																
Earthwork per worker ...	,,	11	8	23	14	12	8	10	12	37	18	...	28	17	13	
Do. do. digger ...	,,	44	32	92	56	48	32	40	50	148	72	...	110	68	52	
Do. do. carrier ...	,,	15	11	31	19	16	11	14	17	50	24	...	37	23	17	
Metal breaking per worker	,,	1·2	0·7	1·7	1·2	1·2	1·2	1·2	1·2	8·9	2·2	...	5·5	2·9	1·8	
3. TOTAL QUANTITIES OF WORK DONE.																
Earthwork in lakhs ...	,,	116·8	49·3	76·5	242·6	123·6	79·9	203·5	446·2	14·2	29·5	...	43·7	111·1	254·8	36
Metal collection do. ...	,,	13·7	4·5	11·7	29·8	19·3	6·5	25·8	55·6	32·8	3·0	3·0	38·8	38·1	14·4	5
Muram do do. ...	,,	39·3	10·3	5·3	54·9	21·4	6·8	28·2	83·1	5·1	4·5	...	9·5	44·4	69·5	11
Consolidation do. ...	,,	19·2	5·4	7·2	31·8	6·7	7·0	13·7	45·4	8·1	2·7	...	10·8	40·8	30·3	7
4. TOTAL LENGTH OF ROAD-WORK.																
New Roads—																
Metalled ...	Miles.	5	...	14	19	24	...	24	43	5	...	...	5	38	49	87
Muramed ...	,,	4	8	...	12	...	...	...	12	...	..	...	...	...	38	38
Unmetalled ...	,,	...	10	28	38	...	5	5	43	...	...	...	...	...	8	8
Total ...	,,	9	18	42	69	24	5	29	98	5	...	...	5	38	95	133
Raised in Class—																
Metalled ...	Miles.	62	6	13	81	40	18	58	139	66	17	...	83	34	...	34
Muramed ...	,,	48	23	...	71	...	24	24	95	...	...	...	...	...	...	...
Unmetalled ...	,,	17	...	...	17	50	11	61	78	...	...	...	...	...	...	...
Total ...	,,	127	29	13	169	90	53	143	312	66	17	...	83	34	...	34
Repaired ...	,,	8	15	27	50	37	20	57	107	118	...	...	118	25	7	32
Grand Total ...	,,	144	62	82	288	151	78	229	517	189	17	...	206	97	102	199

Works Department Section—(*Contd.*)

Divisions, Districts and Public Works Divisions.—(Contd.)

SION.	NERBUDDA CIVIL DIVISION.								CHHATTISGARH CIVIL DIVSION.				FEUDATORIES AND ZAMINDARIS.	TOTALS AND AVERAGES FOR CENTRAL PROVINCES.
Total Nagpur Civil Division. *	Hoshangabad District.	Nimar District.	Betul District.	Total Hoshangabad Public Works Division.	Narsinghpur District.	Chhindwara District.*	Total Narsinghpur Public Works Division.	Total Nerbudda Civil Division.	Raipur District.	Bilaspur District.	Sambalpur District.	Total Public Works Eastern and Civil Chhattisgarh Division.	Chhattisgarh States Roads Division.	
49	32	24	18	32	11	26	26	32	24	29	16	29	45	49
1	5	11	11	5	5	7	5	5	4	7	...	4	9	1
18	14	17	15	15	9	14	12	14	11	12	16	13	23	14
12·0	3·0	...	2·0	3·0	4·0	2·0	4·0	4·0	2·2	2·8	...	2·8	2·0	12
0·7	0·6	1·0	1·7	0·6	0·8	2·0	0·8	0·6	0·5	0·7	...	0·5	2·0	0·3
3·3	1·3	1·0	1·9	1·4	1·4	2·0	1·7	1·5	1·2	1·1	...	1·2	2·0	1·8
21	16	21	17	18	11	17	14	16	14	15	19	16	27	17
85	64	84	68	72	44	68	56	66	56	60	76	64	108	68
28	21	28	23	24	15	23	19	22	19	20	25	21	36	23
3·9	1·5	1·2	2·2	1·6	1·7	2·4	2·0	1·8	1·5	1·3	..	1·4	2·4	2·2
409·6	288·9	4·6	173·3	466·8	241·2	75·5	316·7	783·5	305·9	205·5	19·4	530·8	144·2	2,315
91·3	24·0	0·7	9·2	33·9	27·2	7·8	35·0	68·9	29·2	25·5	...	54·6	0·7	272
123·4	13·7	..	8·3	22·0	2·6	17·5	20·1	42·1	51·5	60·9	3·6	116·1	11·9	377
81·8	6·2	0·6	3·1	9·8	3·3	22·0	25·3	35·1	33·8	27·9	1·1	62·9	1·5	227
92	9	...	...	9	11	2	13	22	65	32	...	97	...	254
38	12	...	...	12	4	3	7	19	25	...	10	35	71	175
8	20	10	...	30	31	8	39	69	30	...	...	30	...	150
138	41	10	...	51	46	13	59	110	120	32	10	162	71	579
117	33	3	8	44	32	34	66	110	41	45	...	86	...	452
...	19	...	64	83	2	...	2	85	8	52	...	60	...	240
...	45	...	...	45	4	...	4	49	...	...	...	...	...	127
117	97	3	72	172	38	34	72	244	49	97	...	146	...	819
150	68	3	27	98	23	...	23	121	...	...	...	...	...	378
405	206	16	99	321	107	47	154	475	169	129	10	308	71	1,776

* This includes work done under the Hoshangabad Public Works Division in the Chhindwara District.

Appendix F.—(Statistical) to Public

Statistical Account of work done as arranged by Civil

PARTICULARS.	JUBBULPORE CIVIL DIVISION.								NAGPUR CIVIL DIVI-						
	Jubbulpore District.	Mandla District.	Seoni District.	Total Jubbulpore Public Works Division.	Saugor District.	Damoh District.	Total Saugor Public Works Division.	Total Jubbulpore Civil Division.	Nagpur District.	Wardha District.	Chanda District.	Total Nagpur Public Works Division.	Bhandara District.	Balaghat District.	Total Bhandara Public Works Division.
V.—RATIO OF FAMINE TO ORDINARY RATES OF WORK.															
1. Wages only ...	1·9	2·6	1·4	1·9	2·5	3·2	2·7	2·2	1·5	1·6	0·9	1·5	1·4	1·8	1·6
2. Including wages and miscellaneous charges ...	2·5	3·7	1·8	2·5	3·2	4·4	3·6	2·9	1·7	2·1	0·9	1·7	1·7	2·2	2·0
3. Including all charges, wages, gratuitous and miscellaneous ...	2·7	4·2	1·9	2·8	3·6	5·2	4·2	3·2	1·8	2·2	0·9	1·8	1·8	2·4	2·
VI.—AVERAGE PRICE OF FOOD GRAINS IN SEERS PER RUPEE.															
1. Average of 5 years, 1890 to 1894 ...	15	18	17	17	13	16	15	16	15	15	...	15	16	16	
2. During present famine ...	9	9	9	9	8	8	8	9	9	9	...	9	9	8	
VII.—DEATH-RATE PER MILLE.															
1. Average of preceding decennial period ...	35·1	30·5	29·8	31·8	40·0	38·9	39·4	34·9	30·8	35·7	31·8	32·8	29·8	29·3	
2. During present famine ...	74·2	99·8	73·8	82·6	89·0	72·7	80·8	81·9	46·4	51·9	37·8	45·4	58·0	87·8	

Works Department Section.—(*Concld.*)

Divisions, Districts and Public Works Divisions.—(Concld.)

SION.	NERBUDDA CIVIL DIVISION.								CHHATTISGARH CIVIL DIVISION.				FEUDATORIES AND ZAMINDARIS.	TOTALS AND AVERAGES FOR CENTRAL PROVINCES.
Total Nagpur Civil Division.	Hoshangabad District.	Nimar District.	Betul District.	Total Hoshangabad Public Works Division.	Narsinghpur District.	Chhindwara District.*	Total Narsinghpur Public Works Division.	Total Nerbudda Civil Division.	Raipur District.	Bilaspur District.	Sambalpur District.	Total Public Works Eastern and Civil Chhattisgarh Division.	Chhattisgarh States Roads Division.	
1·6	2·0	1·2	1·2	1·7	1·9	1·5	1·7	1·7	1·8	1·8	1·1	1·8	1·5	1·8
1·9	2·9	1·7	1·4	2·4	2·6	2·1	2·4	2·4	2·4	2·3	1·6	2·3	2·0	2·3
2·0	3·2	1·9	1·6	2·6	2·8	2·2	2·5	2·6	2·6	2·4	1·7	2·5	2·1	2·5
16	14	14	16	15	14	15	15	15	18	19	18	18	...	16
9	8	8	8	8	8	7	8	8	9	9	9	9	...	8
31·5	36·3	37·2	34·7	36·1	40·9	31·5	36·2	36·1	30·8	27·7	29·1	29·2	...	33·3
56·4	69·0	81·4	71·9	74·1	78·6	49·1	63·8	70·0	73·4	87·6	30·5	63·8	...	67·9

* This includes work done under the Hoshangabad Public Works Division in the Chhindwara District.

Appendix G. (Statistical) to Public

Abstract Statement of Value of Work

Civil Division.	Serial No.	District.	Value of work done at normal P. W. D. rates.	Total Expenditure and No. of Day-units relieved.			Percentage of Gratuitous relief and special Establishment, &c., over Total Expenditure.	
				Total Expenditure, including gratuitous relief.	Total Expenditure, excluding gratuitous relief.	Total number of relief-workers.	Gratuitous relief.	Special establishment, tools, hutting &c.
1	2	3	4	5	6	7	8	9
			Rs.	Rs.	Rs.	No.	Percentage.	Percentage.
Jubbulpore ...	1	Jubbulpore ...	2,68,464	7,30,239	6,63,855	8,517,614	9	22
	2	Mandla ...	83,926	3,54,659	3,13,202	3,778,033	12	27
	3	Seoni ...	1,30,540	2,42,263	2,32,426	1,835,799	4	21
		Total for Jubbulpore Public Works Department Division.	4,82,930	13,27,161	12,09,483	14,131,446	9	23
	4	Saugor ...	1,80,518	6,55,556	5,73,441	5,852,990	13	1
	5	Damoh ...	90,178	4,68,166	4,01,107	4,644,787	14	2
		Total for Saugor Public Works Department Division.	2,70,696	11,23,722	9,74,548	10,497,777	13	
Nagpur ...	6	Nagpur ...	1,94,170	3,51,886	3,38,142	2,494,247	4	
	7	Wardha ...	33,537	71,832	70,084	474,551	2	
	8	Chanda ...	6,407	5,555	5,555	...	...	
		Total for Nagpur Public Works Department Division.	2,34,114	4,29,273	4,13,781	2,968,798		
	9	Bhandara ...	4,60,570	8,49,718	7,76,770	6,251,161		
	10	Balaghat ...	4,55,379	10,90,214	9,92,160	8,771,087		
		Total for Bhandara Public Works Department Division.	9,15,949	19,39,932	17,68,930	15,022,248		

Works Department Section.

done by Famine labour.

Ratio of Famine to ordinary rates.		Work done and Expenditure incurred per Day-unit relieved.			Duration of work.	Remarrs.
Including gratuitous relief.	Excluding gratuitous relief.	Number of units relieved per rupee per diem.	Work done per unit relieved per diem.			
			Earthwork ordinary.*	Metal breaking.		
10	11	12	13	14	15	16.
Ratio.	Ratio.	No.	C. ft.	C. ft.	Months.	
2·7	2·5	12	9	1·0	7	
4·2	3·7	11	6	0·5	9	
1·9	1·8	8	19	1·4	8	
2·8	2·5	11	11	1·0	8	
3·6	3·2	9	10	1·0	7	
5·2	4·4	10	6	1·0	6	
4·2	3·6	9	8	1·0	7	
1·8	1·7	7	31	7·4	5	
2·2	2·1	7	15	1·8	6	
0·9	0·9	...	...	...	...	There were no actual Relief operations in this district: the expenditure was merely for materials collected.
	1·7	7	23	4·6	6	
	1·7	7	15·1	2·5	9	
	2·2	8	11	1·5	7	
	2·0	8	13·0	2·0	8	

*N. B.—"Earthwork, ordinary" denotes earthwork in banks or cuttings or earthen sides of roads in black or brown soil; average lead and vertical lift being 50 ft. and 5 ft., respectively; equivalent to a "reduced lead" of 146 ft. by Mr. Higham's and 186 ft. by the Central Provinces standard.

Appendix G (Statistical) to Public

Abstract Statement of value of Work

Civil Division.	Serial No.	District.	Value of work done at normal P. W. D. rates.	Total Expenditure and No. of Day-units relieved.			Percentage of Gratuitous relief and special Establishment, &c., over Total Expenditure.	
				Total Expenditure, including gratuitous relief.	Total Expenditure, excluding gratuitous relief.	Total number of relief-workers.	Gratuitous relief.	Special establishment, tools, hutting, &c.
1	2	3	4	5	6	7	8	9
			Rs.	Rs.	Rs.	No.	Percentage.	Percentage.
Nerbudda ...	11	Hoshangabad ...	4,38,790	13,94,555	12,83,925	10,542,306	8	30
	12	Nimar ...	10,274	19,172	17,631	169,030	8	26
	13	Betul ...	2,18,160	3,39,734	3,07,139	3,189,064	10	13
		Total for Hoshangabad Public Works Department Division.	6,67,224	17,53,361	16,08,695	13,900,400	8	27
	14	Narsinghpur ...	3,01,881	8,34,224	7,85,290	7,110,012	6	27
	15	Chhindwara* ...	1,88,686	4,02,612	3,91,042	3,235,250	3	27
		Total for Narsinghpur Public Works Department Division.	4,90,567	12,36,836	11,76,332	10,345,262	5	27
Chhattisgarh...	16	Raipur ...	5,25,841	13,54,862	12,76,775	13,216,175	6	24
	17	Bilaspur ...	3,87,643	9,29,939	8,82,261	8,086,029	5	
	18	Sambalpur ...	11,816	19,754	18,770	171,724	5	
		Total for Eastern Public Works Department Division.	9,25,300	23,04,555	21,77,806	21,473,928	6	
	19	Chattisgarh States Roads Division.	82,607	1,73,457	1,63,475	1,308,331	6	
		Totals and averages for Central Provinces.	**40,69,387**	**1,02,88,297**	**94,93,050**	**89,648,190**	**8**	

Works Department Section.

done by Famine labour.

Ratio of Famine to ordinary rates.		Work done and Expenditure incurred per Day-unit relieved.			Duration of work.	Remarks.
Including gratuitous relief.	Excluding gratuitous relief.	Number of units relieved per rupee per diem.	Work done per unit relieved per diem.			* N. B.—"Earthwork, ordinary" denotes earthwork in banks or cuttings or earthen sides of roads in black or brown soil; average lead and vertical lift being 50 ft. and 5 ft., respectively; equivalent to a "reduced lead" of 146 ft. by Mr. Higham's and 186 ft. by the Central Provinces standard.
			Earthwork ordinary. *	Metal breaking.		
10	11	12	13	14	15	16
Ratio.	Ratio.	No.	C. ft.	C. ft.	Months.	
3·2	2·9	8	14	1·3	7	
1·9	1·7	9	17	1·0	5	
1·6	1·4	9	15	1·9	6	
2·6	2·4	8	15	1·4	6	
2·8	2·6	9	9	1·4	6	
2·2	2·1	8	14	2	8	* Includes work done under the Hoshangabad Public Works Division in the Chhindwara District.
2·5	2·4	8	12	1·7	7	
2·6	2·4	10	11	1·2	7	
2·4	2·3	9	12	1·1	6	
1·7	1·6	9	16	...	7	
2·5	2·3	9	13	1·2	7	
2·1	2·0	8	23	2·0	6	
[illegible]·5	2·3	9	14·0	1·8	7	

Appendix H (Statistical) to Public Works Department Section.

Statement showing Ratio of Famine to ordinary Departmental Rates.

District.	Total value of work done.	Expenditure.			Ratio of Famine to Ordinary rates.			Remarks.
		Wages.	Wages and Miscellaneous.	Total including all charges.	Wages only.	Wages and Miscellaneous.	Total, including all charges.	
	Rs.	Rs.	Rs.	Rs.				
Jubbulpore ...	2,68,464	5,06,601	6,63,855	7,30,239	1·9	2·5	2·7	
Mandla ...	83,926	2,17,975	3,13,202	3,54,659	2·6	3·7	4·2	
Seoni ...	1,30,540	1,82,509	2,32,426	2,42,263	1·4	1·8	1·9	
Saugor ...	1,80,518	4,55,442	5,73,441	6,55,556	2·5	3·2	3·6	
Damoh ...	90,178	2,85,872	4,01,107	4,68,166	3·2	4·4	5·2	
Nagpur ...	1,94,170	2,96,896	3,38,142	3,51,886	1·5	1·7	1·8	
Wardha ...	33,537	53,939	70,084	71,832	1·6	2·1	2·2	
Chanda ...	6,407	5,555	5,555	5,555	...	...	...	No actual relief operations in this District. Materials only collected.
Bhandara ...	4,60,570	6,60,635	7,76,770	8,49,718	1·4	1·7	1·8	
Balaghat ...	4,55,379	8,22,812	9,92,160	10,90,214	1·8	2·2	2·4	
Hoshangabad ...	4,38,790	8,64,816	12,83,925	13,94,455	2·0	2·9	3·2	
Nimar ...	10,274	12,682	17,631	19,172	...	...	...	Operations were on a small scale.
Betul ...	2,18,160	2,62,724	3,07,139	3,39,734	1·2	1·4	1·6	
Narsinghpur ...	3,01,881	5,63,988	7,85,290	8,34,224	1·9	2·6	2·8	
Chhindwara ...	1,88,686	2,84,120	3,91,042	4,02,612	1·5	2·1	2·2	
Raipur ...	5,25,841	9,45,759	12,76,775	13,54,862	1·8	2·4	2·6	
Bilaspur ...	3,87,643	6,78,665	8,82,261	9,29,939	1·8	2·3	2·4	
Sambalpur ...	11,816	13,578	18,770	19,754	...	...	...	Only road co
Chhattisgarh States Roads Division.	82,607	1,26,769	1,63,475	1,73,457	1·5	2·0	2·1	
Total for Central Provinces.	40,69,387	72,41,337	94,93,050	1,02,88,297	1·8	2·3	2·5	

Secretariat Press, Nagpur:—R. D., 4-4-98—600.

GENERAL ORDERS AND CIRCULAR LETTERS, &c.,
REFERRED TO IN PARAGRAPHS 8 AND 9 OF
THE FAMINE REPORT, P. W. D. SECTION.

CONTENTS.

Circular Letter No. 270—6673, dated the 24th October 1896.

Do. No. 272—6756, dated the 27th October 1896.

General Order No. C-498, dated the 26th December 1896.

Circular Letter No. 2—1, dated the 2nd January 1897.

General Order No. 70—715, dated the 1st February 1897.

Do. No. C-154, dated the 20th March 1897.

Circular Letter No. 254—2619, dated the 10th April 1897.

General Order No. 344—3441, dated the 13th May 1897.

Circular Letter No. 354—3491, dated the 14th May 1897.

Do. No. 357—3572, dated the 17th May 1897.

Do. No. 481—4444, dated the 1st July 1897.

General Order No. 418—4517, dated the 5th July 1897.

Circular Letter No. 645—6212, dated the 31st August 1897.

Do. No. 747—7108, dated the 9th October 1897.

Do. No. 752—7180, dated the 13th October 1897.

General Order No. 355—3571-A, dated the 15th May 1897.

Circular Letter No. 385—3822, dated the 28th May 1897.

Do. No. 579—5701, dated the 7th August 1897.

Do. No. C-645, dated the 17th September 1897.

CENTRAL PROVINCES, PUBLIC WORKS DEPARTMENT.

Secretariat.

No. $\frac{270}{6673}$.

FROM

E. E. OLVER, ESQ., M. INST. C. E.,

SECRETARY TO CHIEF COMMISSIONER,

P. W. D., Central Provinces,

TO

ALL COMMISSIONERS,
„ DEPUTY COMMISSIONERS,
„ EXECUTIVE ENGINEERS, AND
„ SUB-DIVISIONAL OFFICERS,

Central Provinces.

Dated Nagpur, the 24th October 1896.

SIR,

I am directed to forward a Note by the Chief Engineer, Public Works Department, Central Provinces, in regard to:—

(1) The Public Works organization to be adopted in connection with Relief Works.

(2) Some suggestions for the most useful employment of Famine labour.

2. I am to say that these suggestions have the Chief Commissioner's full approval.

I have the honour to be,

Sir,

Your most obedient Servant,

E. E. OLIVER,

Secretary to Chief Commissioner.

Enclosures.
Note.

Note, dated 17th October 1896, by the Chief Engineer, P. W. D., Central Provinces, in regard to—

(1) The P. W. organization to be adopted in connection with Famine Relief Work.

(2) Some suggestions for the most useful employment of Famine labour.

With the prospect of having to provide for undertaking, at short notice, relief works on a more or less extensive scale, it is important that we should see that our Provincial P. W. organization for supervision is placed on as thoroughly sound a working basis as possible. Our Public Works Divisions are at present few in number and cover a very large area, coinciding in most cases with four or more Civil Districts, some of which Districts are, in themselves, exceptionally large. It would not be possible for the Executive Engineers in charge to personally communicate with the District Officers on all the questions likely to shortly arise, or to themselves promptly carry out all the needful arrangements. A great deal must, of necessity, be delegated to the Sub-Divisional Officers. It is necessary, therefore, to carefully select the latter, and see that the best and most efficient men available are placed in Sub-Divisional charge.

For each Civil District we have now a corresponding Sub-Divisional Officer, exclusive of those holding special charges, or in charge of outlying portions of Districts, like Pachmarhi, Kamptee, Dhamtari, Umrer, &c. These District Sub-Divisional Officers, at any rate for the present, will have to do the work and undertake the responsibility usually falling to Divisional Engineers. They should be directed to communicate with the Deputy Commissioner of their district, and act promptly upon any calls that Officer may make upon them. The Sub-Divisional Staff must be so arranged that, should it become necessary to carry out work in a District under the Famine Code, the Sub-Divisional Officer and his Staff, expanded as may be found necessary, can be made over to act immediately under the orders of the Deputy Commissioner, who, under the Famine Code, would delegate to the Sub-Divisional Officer such powers as he might consider desirable.

The Famine duties of the Sub-Divisional Officer would be in addition to his ordinary Public Works duties. It is probable that, in some Sub-Divisions, by the time Famine Relief Works are declared to have passed from "Ordinary" into "Relief Works Proper", and have to be on an extensive scale, Public Works will have become much restricted, and it might still be possible for the same Sub-Divisional Officer to control both. In others, it may, at this stage, become necessary to provide a second officer to devote his time exclusively to Relief Works, or it may suffice to strengthen the Sub-Divisional Staff. This will receive due attention in this department, but at this stage it seems sufficient to make the

Sub-Divisional Officer the Engineering adviser and assistant to the Deputy Commissioner, and it is hoped this arrangement will provide him with a fairly well organized and trained staff ready to promptly commence such Relief Works as may be found necessary. It should, moreover, be capable of expansion to suit Famine Code requirements, and, further, assist Government to get the best value for the money expended.

The Executive Engineer, in Divisional charge, should work more immediately with the Commissioner of the Civil Division, giving him all possible assistance in making out such general relief proposals, or arrangements in connection therewith, that may have to be dealt with by the Commissioner, or may require to come to Government for sanction.

For the time being, there will devolve upon these Divisional Officers much of the work and responsibility usually undertaken by Superintending Engineers.

It is not possible at this stage to lay down any detailed instructions for the guidance of P. W. Officers carrying out Relief Works, beyond those to be found in the C. P. Famine Code for 1896, but it should be remembered that in all cases, while giving relief, we want to obtain the greatest amount of useful work we can get for the money spent.

For ordinary District, and in fact for many of our roads, earthen banks are often the least necessary part of the road, in most cases are of subordinate importance to efficient water crossings, be the latter bridges, culverts, road dams, or paved gaps. Given suitable water crossings, cart traffic can, for a good part of the year, practically find its way over the ordinary ground surface, and banks are only needed in swampy or low-lying ground. Even there, they should not be high enough to sensibly intercept the surface drainage of the country.

Again, a high bank of earth without a metalled or well consolidated surface is, in some soils, worse than useless; in the black cotton soil of these Provinces it is liable to become a positive hindrance to traffic. Unfortunately, this bank of earth is sometimes the only work suitable for famine labour and so has come to be looked on as the commonest form of relief work.

In this connection it should be remembered that the amount of labour it is possible to employ on an ordinary district road bank is but small in proportion to the mileage. Taking a road 21 feet wide at the top with side slopes of 2 to 1, and allowing an average height of bank throughout the district of $1\frac{1}{2}$ feet (it would be more in black cotton and less on the harder soils) the earthwork will equal $\frac{21+27}{2} \times 1\frac{1}{2} = 36$ cubic feet per foot of length. The Famine Code, calculating tasks in earthwork, takes, page 72, for task work adapted to persons of slightly inferior physique, allowing a 50 feet lead and a lift not

exceeding 5 feet, the conditions prevailing generally on such a road, as a fair daily task for a man and two women 100 cubic feet. The 36 cubic feet thus approximates pretty closely to a task for one person, or 5,280 days work per mile = 176 persons per mile per month.

As an approximate figure easy to remember this class of roads may be taken as affording employment for about 200 persons "of slightly inferior physique" per mile per month.

Each case will, no doubt, have to be dealt with on its merits, and with due regard to what the District Officer may consider to be the most pressing needs, but I would suggest for consideration the great desirability of employing labour in the first instance on the relatively harder and less popular work. Take, for instance, the collection and breaking of road metal, which is harder and less popular work than throwing up 1½ feet of embankment; but if the latter exclusively is taken up first all the able-bodied persons will naturally flock to it, and quickly exhaust this means of employment; work, moreover, that it would be better to reserve for the more weakly, or for labour that cannot be moved far and requires close supervision.

I would advocate, therefore, that, in the first instance, attempts should be made to employ labour

(*a*) On the collection and breaking of road metal.

(*b*) On the collection of suitable moorum.

(*c*) On the harder cutting required for ghat work.

(*d*) On the approaches to water crossings, if possible.

(*e*) On the collection, if possible, of suitable stone for causeways and road dams

and I would offer such rates as would induce the able-bodied and, even persons of "slightly inferior physique", to volunteer for these works in preference to ordinary earthwork, which latter should be paid for at low rates and carried out as far as possible by task work.

It does not at present seem necessary to suggest procedure in regard to the construction or improvements of village bunds, of wells, the digging and clearing of tanks, or of village reservoirs.

The extent to which labour can be employed on these is uncertain. If found necessary, further instructions will follow, but the main principle of endeavouring to obtain the maximum amount of useful work will apply in all cases.

E. E. OLIVER,

Chief Engineer, C. P.

CENTRAL PROVINCES, PUBLIC WORKS DEPARTMENT.

Chief Engineer's Office.

No. $\frac{272}{6756}$.

FROM

E. E. OLIVER, ESQ., M. INST. C. E.,

CHIEF ENGINEER,

Central Provinces

TO

ALL EXECUTIVE ENGINEERS

AND SUB-DIVISIONAL OFFICERS,

Central Provinces.

Dated Nagpur, the 27th October 1896.

SIR,

In continuation of this Office No. $\frac{270}{6673}$, dated the 24th current, regarding Public Works organization for relief-works, I have the honour to forward copy of a letter, dated the 13th idem, from Mr. Carey, to Commissioners, and to ask you to communicate with Commissioners and Deputy Commissioners in regard to any tract of country it may be necessary to examine. If it be considered necessary, the most suitable subordinate available must be told off to give preliminary assistance under orders of the Sub-Divisional Officer. Executive Engineers should give such professional advice as required.

This would be a preliminary. It is probable that works of this nature, suitable for famine relief works, will be confined to a few Districts; and they may not be necessary even there. But if it should be found, in any District, that tanks are likely to afford work on any considerable scale, as well as be of benefit to the people it may become necessary to tell off special men, and a report of such conditions should be made as soon as possible to Government.

I have the honour to be,

Sir,

Your most obedient Servant,

E. E. OLIVER,

Chief Engineer,

Central Provinces.

Enclosures.
Copy of letter.

Pachmarhi, the 13th October 1896.

MY DEAR { ANDERSON, / FRASER, / COLONEL TEMPLE.

Please see paragraph 6—II-G of the Famine Code. I learn from Oliver that the Chief Commissioner would not be averse to money being spent on tanks by way of relief-work for the agricultural classes. The question is: (*i*) where are the tanks which require clearing or repair; (*ii*) on what sites could new tanks be constructed with prospective utility. Our Famine Note-books should give the required information. I regret to say that those I have examined do not. Where, as in Chhattisgarh, the water-supply is derived from tanks, and wells do not exist: we must apparently turn our attention in the first place to new projects, leaving the clearing and deepening of tanks until late in the hot weather. I would then suggest for your consideration that each Revenue Inspector should be called upon to submit a list of possible works for his circle. Where the Land Record staff is under the Settlement Officer, as in Seoni, Bhandara, Balaghat, he will be instructed by me to render all assistance to the Deputy Commissioner. The notes recorded at attestation, as a basis for the compilation of the Famine Note-book, will also prove useful. The Deputy Commissioner should then weed out the information, selecting the most likely projects upon which a start might be made. The others would be kept in reserve. The exact position of each village might be fixed by entering the number of the patwari circle in which it is situate and the name of the patwari. A brief note might be added as to the class of work to be done, whether construction or repairs; the amount of money that would be spent, and labourers that could be employed for a given time; and whether the tank is required for irrigation, drinking or other domestic purposes. If for irrigation, it should be stated roughly what area will thereby be secured. It should, moreover, be stated: (*i*) whether the malguzar is a substantial man and likely to do the work himself with funds at his disposal or borrowed in the shape of takavi; (*ii*) whether in the larger villages, where Banias and others congregate, any subscriptions are likely to be forthcoming for the carrying out of a local work (last year in the Murwara Tahsil some works were carried out on these lines without Government interference): (*iii*) whether no action can be anticipated in the absence of Government assistance. Oliver is, I understand, prepared to give us professional assistance, at once, for the examination of the projects. This done, we should be ready to start work in various localities, and it occurs to me that we might get many such a job done through the malguzar or patel of the village, giving him an advance of money, fixing the rates at which the labourers are to be paid, enjoining that all persons coming on the work should be given employment, and measuring up every fortnight or month, as might be deemed expedient. The case of the Zamindaris is somewhat less urgent than that of the Khalsa. The zamindars will, doubtless, realise the responsibility which devolves upon them of supporting their people. But some, such as the zamindar of Kampta in Bhandara, argue that there is no scope for further improvement in their estate. It is well to have information to combat this argument. Some malguzars may be prepared to take takavi and to carry out the works themselves. In other cases it may devolve upon Government to get the work done as an ordinary relief-work. This would seem, moreover, a favourable opportunity for supplying ryotwari areas with tanks, and thus improving the Government estate and affording a nucleus of *secured* land, round which cultivation may be expected to extend. The attention of the Deputy Commissioners of Mandla, Balaghat and Chanda might be specially invited to this matter. The portions of your division, where it would, in my opinion, be expedient to call for this information, are as follows. In other districts or tahsils tanks are not, as far as my experience goes, required for the class of cultivation practised.

JUBBULPORE DIVISION.

Jubbulpore.—The Murwara Tahsil, and possibly the non-haveli portions of the Jubbulpore and Sihora Tahsils.

Damoh.—The non-haveli tract in the south of the district.

Mandla.—The whole district, and especially the ryotwari estate; but I know little of the class of cultivation in Dindori Tahsil.

Seoni.—The rice-growing tract in the south and east of the Seoni Tahsil. With the assistance of the Powars many a project should, I fancy, be found to be feasible within that tract.

NAGPUR DIVISION.

Chanda.—The whole district, less, perhaps a portion of the Warora Tahsil on the Nagpur and Wardha borders—especially the ryotwari estates. There are, I understand, in Ghorpeth and other tracts recently opened out for ryotwari settlement many beds of old tanks which have become silted up. The Assistant Settlement Officer, and Assistant Superintendents, Jawahir Singh and Damodar Bhauji, should be able to furnish a considerable amount of information on the subject. Up to now the Assistant Settlement Officer and Land Record Staff is under the Deputy Commissioner, and he can command their services.

Bhandara.—I do not apprehend any great scarcity in this district, as the irrigated rice should do well, but the demand for grain from the North-Western Provinces may, by raising prices, cause distress to the poorer classes who are paid in cash, and some relief-work may be necessary. The Deputy Commissioner could get together such a list as is required with the assistance of the Settlement and Land Record Departments, if you thought this step necessary and desirable. Two tahsils, Bhandara and Tirora, have been attested, and it should be possible to write up the Famine Note-books at an early date. The east of the Tirora Tahsil towards the Amgaon, Salekasa and Darrekasa Zamindaris is probably the tract likely to suffer most in the district and to require most attention from the Deputy Commissioner at the outset. But there are also villages unprotected by irrigation in the Tirora and Rampaili Parganas, where, judging from the experience of last year, some distress may be anticipated. I will write to Mr. Hassan Khan, Assistant Settlement Officer, to give all assistance that the Deputy Commissioner may require.

Balaghat.—Mayne could give information as to the west of Burha Tahsil from the notes recorded at attestation. I will write to him to prepare a list of possible projects in the Behir Ryotwari. He has some local knowledge; and a Revenue Inspector, Sitaram Pant, knows every village up there.

Umrer Tahsil of Nagpur.—The Land Record Staff of Nagpur is under the Deputy Commissioner and the Superinteudent, and his Revenue Inspectors should be able to collect all necessary information, at an early date, without material difficulty. But here again, from information I have received, there should not for the present at least be any real scarcity. But it is well to be prepared, and the Deputy Commissioner and his officers could write up the Famine Note-books this year after testing the information submitted by the Land Record Staff.

CHHATTISGARH DIVISION.

The difficulty in Raipur and Bilaspur in connection with the clearing and deepening of tanks is that the people are dependent on these reservoirs for their water-supply, and wells are practically non-existent. Little can therefore be done in this direction until late in the hot weather. And at the outset we must apparently look to the construction of new tanks.

Raipur.—The rich black soil plain of Dhamtari, will, in all probability, yield a good crop of rice, and there is but little scope for tank construction for irrigation purposes in this area; but towards the end of the hot season it might be desirable, if scarcity declared itself, to clear out and deepen the existing tanks. In this tahsil the aid of malguzars should be freely enlisted. Many of them are presumably very well off, as they have not been troubled much by bad seasons. Parts of Simga are bound to suffer badly, and there should be numerous projects capable of being carried out to the east of Simga, and in the Laun and Baloda Parganas, where the Laun Banias and Sarjuparshad hold many villages. Similarly for the Drug and Raipur Tahsils. The selection of the sites of tanks which would command a fairly large area is not always an easy matter for a non-professional

hand, but with assistance from the Public Works Department, I am sanguine that much good could be accomplished. The Khallari Pargana is a tract where the yellow soil lends itself readily to tank construction. The Danis who hold not a few villages in this region could presumably be looked to for some aid, though I believe they are indebted to some extent.

Bilaspur.—The same remarks apply to the Jangir and the Bilaspur Tahsils as to the Raipur, Drug and Simga Tahsils of Raipur. The south-east portion of Mungeli is in the same category. That portion of the latter tahsil, which borders on the Kawardha Estate and the Pandaria Zamindari, is a rich black-soil tract, much intersected by rivers, from which many villages draw their water-supply. There are some tanks in these parts (very foul ones many of them) which are used for drinking and washing purposes. Possibly much labour might be usefully employed in clearing out the existing tanks late in the hot weather, but I do not think there is any appreciable scope for the construction of tanks for irrigation purposes. In the Lormi and Tarenga Talukas there are, to the best of my belief, many places where new tanks could be constructed with advantage, or existing works enlarged.

Sambalpur.—It would be useful to collate information on the same lines, but as a 12-anna rice crop is expected, there should be no real distress in this district.

I would add, in conclusion, that the draft of this letter has been submitted to the Chief Commissioner, and is now issuing with his approval. I propose to await your reply before addressing the Settlement Officers of Seoni, Bhandara and Balaghat.

Yours Sincerely,

L. S. CAREY.

General Order No. C-498.

CENTRAL PROVINCES,

PUBLIC WORKS DEPARTMENT.

FAMINE RELIEF WORKS.

THE following rules and orders are issued for the guidance of officers employed on Relief Works conducted under the provisions of the Famine Code and carried out by the Public Works Department.

The orders should be read in connection with the suggestions contained in the Chief Engineer's note circulated with this Office No. $\frac{270}{6678}$ of the 24th October, 1896, and are in supersession of the latter portions of paragraphs 2 and 3 of that note, placing the Sub-Divisional Staff under the orders of the Duputy Commissioner. It has now been decided to entrust the management of all works entered in Statement B of Relief Works Programmes to the Public Works Department.

The rules in Sections X, XI, XII, XIII and XIV as to Drinking-water, Hutting, Conservancy, Field Hospitals and Food, have been approved by the Administrative Medical Officer.

By order of the Chief Commissioner,
E. E. OLIVER,
Secretary to the Chief Commissioner.

Dated 26th December 1896.

These instructions—based to a large extent on the results of practical experience obtained in the North-Western Provinces—are for guidance in conducting in the field Relief Works under the Famine Code in tracts officially recognized as distressed. They are not applicable to works conducted by the Department of Public Works as ordinary works under Article 39, Famine Code, or as test works, undertaken in districts or tracts under observation, but not officially recognized as distressed.

2. The work which has to be done in the field may be conveniently considered under the following headings:—

I.—Grants.
II.—Size of Charges and Establishment required.
III.—Organizing Relief labour.—The Gang.
IV.—The Task.—Setting out work and getting it done.
V.—Wages.
VI.—Field Accounts.
VII.—Funds and the Supply of Coin.
VIII.—Checking Work, Numbers and Payments.
IX.—Tools and Baskets.
X.—Drinking-water.
XI.—Hutting.
XII.—Conservancy.
XIII.—Field Hospitals.
XIV.—Food.

I.—GRANTS.

3. Grants for all Relief Works carried out by the Public Works Department are to be placed at the disposal of the Chief Engineer, who will allot them as required by Districts.

Applications for funds under all heads, including Works, Special Establishment, Tools and Plant, Hutting, &c., should be submitted by the Sub-Divisional Officer for his District, through the Divisional Officer to the Examiner of Public Works Accounts on the 10th of each month for the following month. Such applications should be submitted at once for funds expended by Public Works Department in November and required for December separately from the demands for January. A copy of the application must at the same time be posted by the Sub-Divisional Officer direct to the Secretary, Public Works Department. The last is absolutely necessary in order that the Administration may be kept informed of the amount of funds required.

II.—"CHARGES" AND ESTABLISHMENT REQUIRED.

4. The number of persons, not workers merely, but men, women and children that form a "Charge" should not exceed 5,000, or at the most 6,000, nor be less that 2,000, and will require an "officer-in-charge," whose duties are described in Article 51 of the Famine Code.

If the numbers on a work exceed 5,000 an additional work should be commenced without delay; another part of the same road may suffice, but it must be a separate "Charge." When the numbers exceed 6,000, the excess should be at once drafted off to the separate "Charge."

If the "Charge" contains fewer than 2,000 persons some reduction in the establishment laid down in the subsequent paragraphs will be needed. For a small number, say 500 to 1,000, a "work agent" may have to be substituted for an "officer-in-charge" and the clerical establishment mantained under paragraph 11 of the rules be considerably reduced. But, save under exceptional circumstances to be dealt with under separate orders, these small charges are not considered desirable and are certainly far from economical.

5. The number of "Charges" in a District is for the present to be limited to four and without the special sanction of Government not more than five are to be formed in any District and not until the numbers of persons on Relief Works in that District, exceed 30,000. The work, or portion of a work, forming the "Charge" is to be finished before another, additional to the four in each District, is commenced. When finished the whole of the Famine labour is to be moved to another work that should be marked out in advance.

6. The labourers and their families are to be moved from their villages to the works, or from one work to the other as finished, at Government expense, and the Sub-Divisional Officer is authorized to arrange with the Deputy Commissioner to pay any reasonable charge for the purpose when movements of any length are necessary. It is considered that this need rarely exceed a maximum of 8 annas per family.

7. It is imperatively necessary that Commissioners fix the order of urgency of works for each District—four works in each to begin with, and four others to be taken up as these are finished.

The Sub-Divisional Officer ought not to have to supervise more than four, or at most five, "Charges," and when more than 30,000 persons are on Famine Works in a District, measures must at once be taken to give him assistance, or to form a second Sub-Divisional "Charge."

9. Article 51 of the Famine Code provides that over each separate work managed by the Public Works Department shall be placed an "officer-in-charge," and describes his responsibilities. One is required for each "Charge" who will ordinarily be a Naib-Tahsildar or official of similar standing, placed at the disposal of the Public Works Department and posted by the Divisional Engineer to the Sub-Divisional Officer under whose direct orders he will be. They are not to be appointed for any special district, though it may

be convenient to appoint them to different Civil Divisions. The pay of "officers-in-charge" will be regulated by the rules laid down in paragraphs 2 and 5 of General Department Circular No. 326, dated the 15th January 1897.

The "officer-in-charge" will be the cashier and general supervisor on the spot. He will give out work with the assistance of the sub-overseer, classify workers, be responsible for sanitation, water-supply and drafts to the poor-house. He will keep the Cash Book and be responsible for the entries in it. The giving him of a drawing account or of a permanent advance and of its amount must be decided in each case by the Divisional Engineer.

10. If the "Charge" contains less than about 3,000 persons, it will be sufficient to give him one sub-overseer or "work agent" to help; if there are more than 3,000 persons, two "work agents" will be needed.

The duty of the sub-overseers or "work agents" will be to lay out work in advance, to have profiles ready where necessary, to measure up the work done by each gang of workers, to keep up the usual Public Works measurement book in addition to entering measurements on the forms, and to assess the requisite fines for short work in the manner explained further on. Where there are two or more such men, one of them has to look to the setting out of work ahead, and the other to the proper finishing up of it behind the gangs; one of them is put in charge of all tools on the work. The men will be posted by the Divisional Engineer on indents from the Sub-Divisional Officer, whose duty it is to regulate his indents in accordance with the probable number of workers and to apply a fortnight in advance of requirements wherever that is possible, so as to have the officials on the spot in time to prevent the organization being overpowered by a rush of relief workers. When no more Public Works sub-overseers are available, suitable men should be selected by the Divisional Engineer either by the temporary promotion of Time-keepers, Road Inspectors, &c., or by the engagement of temporary men on a salary of Rs. 40 to Rs. 60 per month on the terms stated in the forms of appointment given in Appendix VII.

11. These officials require sanction by the Divisional Engineer or higher authority for their appointment: those now to be mentioned may be appointed by the Sub-Divisional Officer, who should therefore make his own arrangements for them. In every "Charge" of 5,000 persons there may be entertained the following minor establishment:—

(1) One vernacular clerk qualified to act as sub-cashier under the "officer-in-charge." He will ordinarily be appointed by the "officer-in-charge," who is responsible for him. Salary, Rs. 15 to Rs. 20.

(2) One clerk who can keep accounts in English, and who should have sufficient knowledge of accounts to enable him to keep the Cash Book properly, may best be appointed by the "officer-in-charge," whose assistant he will be. Salary, Rs. 15 to Rs. 20.

(3) One disbursing vernacular clerk (called gang-*moharrir*) for about every 900 or 1,000 relief workers. These should be reputable men known to the tahsildar or other responsible official. When wages are paid twice a week. Salary, Rs. 10 to 15.

(4) One tools-*moharrir*. Salary, Rs. 8 to Rs. 12.

The duties of the first two are obvious, and they work as assistants to the "officer-in-charge." The gang-*moharrirs* calculate the wages, and do the greater part of the actual counting out and disbursing of wages, each for his own gang. The tools-*moharrir*, or store-keeper, has immediate charge of the tools under one of the sub-overseers, who is responsible for him and should make the appointment.

In addition to these there may have to be a Foreman of the water arrangements, with two or more "mates" on daily wages under him, and an experienced "mate" or "*tindal*" for nicking out the work set out by the "work agent." Any gang required for this purpose should be paid as B class.

There must also be a *jamadar* of sweepers in charge of the sweeper gang.

12. For smaller "Charges" Nos. (1) and (4) would probably not be necessary.

III.—Organizing Relief Labour.

The Gang.

13. The gangs found most handy in the North-Western Provinces consist of about 90 persons, of whom about 20 are men-diggers. A mate, paid 6 pies daily more than a digger, should be in charge of each gang, wearing a red cross-belt and big white number, a flag with a similar number being placed at the commencement of his work. It has been found that a *moharrir* can take charge of about 10 of these gangs.

14. The classification of workers as given in Article 52 of the Famine Code may be stated as follows:—

A.—Able-bodied professional labourers accustomed to the kind of work they are engaged on.

B.—Able-bodied labourers, but not accustomed to that kind of work.

C.—Able-bodied persons who are not labourers.

D.—Persons who are weakly, but still fit for light employment.

It has been found in practice that the number of workers under class A is inconsiderable, and for that and other reasons the class need not be considered further. The vast majority of the workers are agricultural or other labourers and peasant farmers, and they rightly fall into class B. There is a sprinkling of class C. These persons are very largely utilized in the miscellaneous employments in connection with Relief Work, where they rightly receive the wage of class B, or in some cases a small addition to it; and the remainder is too small to classify separately. There is a larger proportion of class D (weakly persons), many of whom can work up into class B after a fortnight or so of fair feeding.

15. Having regard to the fact of the case as noticed above, it has been decided to omit classes A and C altogether, and to reduce the classification to the following terms:—

Workers—Class B	...	...	...	Men, women, children.	
Ditto D	...	...	...	Ditto	ditto.
Dependants (gratuitous)	...	...	...	Ditto	ditto.

The children have to be divided into four grades, for the purpose of giving them fairly proportioned wages. The grading to be followed is as below:—

I.—Worker—age apparently between 12 and 16 years. Above 16 years counted as an adult.

II.—Worker—age apparently between 7 (completed) years and 12.

III.—Gratuitous—not in arms and age apparently under 7 years.

IV.—Gratuitous—children in arms.

All children over 7 years of age are to be counted as workers, unless so crippled that there is no likelihood of their filling out and working. All children under 7 completed years of age are to be counted as "dependants on gratuitous relief."

16. People once formed into a gang must not be allowed to stray into others without special permission. Mates should be chosen with an eye to position among labourers, intelligence and power to exercise some sort of authority among their people. During the selection of gangs it is necessary to keep in mind and provide for the requirements of the hour in the way of filling up depleted gangs, and of special labour, such as water drawers and carriers, water distributors, conservancy patrols, sweepers, &c. The latter must be drafted into the special gangs formed for those purposes.

17. As regards "dependants" attention is drawn to Article 78 of the Famine Code. The proportion of little children and other dependants will often rise above 10 per cent. where whole families come on relief together. As regards the persons who may be admitted on to these works, see Articles 54 and 55. These works are not intended for persons unable to do any work and not dependant on a worker; for such there are the poor-houses. But if any such starving persons apply at one of the works they should be fed for a day or two until an opportunity occurs of sending them on to a poor-house.

18. The gang is the basis of all organization, and it must be kept as permanent as possible. No mate should be allowed to admit any new persons into his gang of his own authority. As soon as a gang has received its tools it must be marched on to a previously marked out piece-work and it will thereafter be always treated as a unit. It will be drafted from one work to another, or from one part to another (as when workers are progressing along a road) as a unit, and in accordance with the procedure laid down in Article 56 of the Famine Code, and with the gang registers written up to date.

IV.—The Task.

Setting out work and getting it done.

19. The special gangs of water carriers, hospital attendants, conservancy men, and so forth, have their own special duties, and the practical mode of getting value from them is to take care that there are no more of them than the work requires, and that they perform their duties efficiently. But the great mass of the workers are on a different footing, If the arrangements are complete there is any quantity of work for them to do. They are by no means inclined to do a stroke more for their daily wage than can be helped. The problem in working under the Famine Code is to find how much work they should do without being overworked, and to get them to do it.

20. Section 58 of the Code refers to its Appendix VII on the question of quantity, and the appendix contains rules for modifying tasks in accordance with the 'lift' and the length of 'lead.' Experience has shown that for earthwork in the North-Western Provinces this is unnecessary. The people must be taken as they come, and the diggers must be distributed in the proportion they happen to bear to the fillers and carriers. It has always hitherto happened that the fillers and carriers were far too numerous for the diggers, and, instead of reducing the task because the fillers and carriers might be overworked, it has been found that it was only with a high lift and long lead that the diggers could do enough work to give them a proper amount of work. Under the system of wages laid down by the Code—and no better seems to be practicable—a man's income is very greatly increased by bringing all his women and children on to the works. The Indian peasantry are very much alive to their own direct interests, and there is no reason to suppose that there will ever be much difference in the proportion of men to women and children. As a rule, then, it is safe to omit all calculations as to lift and lead in any work done by famine labour under this system of wages.

21. The problem is thus very much simplified. The task depends entirely on what the digger can excavate; whatever that quantity may be, there will always be enough fillers and carriers to dispose of it. From this it follows that the effectiveness of the whole gang as an instrument of labour depends entirely on the effectiveness of the digger,

and on him alone. If the digger gives a good day's work the whole gang has to do the same; and if he idles, no possible industry on the part of the remainder can make up for it. It is therefore only necessary to consider the quantity of work which a digger may be fairly called on to do, namely, the 'task,' and how to get him to do it.

22. A table below shows how earthwork was being paid for with a gang consisting of about 90 persons in the North-Western Provinces. Of these about 20 were diggers. The work consisted of ordinary earthwork, raising a road bank about 1½ feet high and 20 feet wide. The full task of the man digger was 85 cubic feet per diem. In order that the diggers and mate might earn the full wage, they had each to excavate 85 cubic feet, and $85 \times 20 = 1{,}700$ cubic feet for 20 diggers.

The table shows :—

(1) The wages earned when they did 1,700 cubic feet.
(2) Ditto ditto from 60 to 84 cubic feet each.
(3) Ditto ditto less than 60 cubic feet each.

The women and children had to carry the earth from the side pits, break up the clods and dress the bank.

The wages given were not exactly according to the rules laid down in the Famine Code.

GRAIN 10 SEERS TO THE RUPEE.

CLASS.	Wages that should be paid—*vide* Ready Reckoner.	Wages actually paid at 85 cubic feet per digger.	Wages paid for 60 to 84 cubic feet per digger.	Wages paid for less than 60 cubic feet per digger.	REMARKS.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
Mate	0 2 3	0 2 0	0 1 6	0 1 6	
Men diggers	0 1 9	0 1 9	0 1 3	0 1 0	
Women	0 1 6	0 1 3	0 1 0	0 1 0	
Children I, 12—16 years ...	0 1 0	paid and	classed as	woomen.	
Children II, 7—12 „ ...	0 0 6	0 0 9	0 0 6	0 0 6	
Children III, under 7 years.	0 0 3	0 0 6	0 0 6	0 0 6	No fines for these two classes.
Children IV, in arms ...	0 0 3	0 0 3	0 0 3	0 0 3	

23. In the case of earthwork it is practically impossible to measure the amount of work done by each individual digger: the measurement on which the wages are to be calculated should therefore be the measurement of the excavation done by all the diggers of the gang. Fines for short work must necessarily be inflicted on the whole gang, but when the sum due has been worked out, payments should be made to individuals, children never receiving less than the minimum wage.

For ordinary earthwork the scale below would seem a fair one :—

SOIL.	Workers.	Daily task per digger.
Soft soil	Men diggers ...	90 cubic feet.
	Women „ ...	45 „
Hard earth or soft moorum	Men „ ...	60 „
	Women „ ...	30 „
Hard moorum	Men „ ...	45 „
	Women „ ...	22 „
Very hard moorum	Men „ ...	30 „

Thus for soft soil the task for a gang containing 20 men diggers and 5 women diggers would be $20 \times 90 + 5 + 45 = 2{,}025$ cubic feet.

If this quantity were done the wages would be (*vide* Ready Reckoner) with grain at 10 seers to the rupee :—

	Rs.	A.	P.
Mate	0	2	3
Man digger	0	1	9
Woman digger	0	1	6

Should less than this quantity be done, the wages would be :—

	Rs.	A.	P.	
Mate	0	1	9	or 6 pies more than a digger.
Man digger	0	1	3	
Woman digger	0	1	3	

The wages of the rest of the gang would remain the same, whether the full task be performed or not.

24. For metal breaking the following tasks are proposed :—

	Daily Task.	
	Hard metal as basalt.	Ordinary metal as sandstone.
Men	4½ cubic feet	6 cubic feet.
Women	3 „	4½ „
Children I, 12—16 years	Same as for women	

If these tasks are done, the workers doing them would get B class wage (see Appendix III, Famine Code, page 54), the wages being altered to the nearest pice, *i. e.*, for Re. 0-1-1 only one anna would be paid, while for Re. 0-1-2 one and-a-quarter anna would be paid. If the workers do less than these tasks they would only receive the D class wage. Children from 7 to 12 years old would be employed collecting and carrying stones. They would not be made to break them. They and the dependants would be paid wages as calculated for the paying price of grain in the Ready Reckoner.

25. The above tasks are only given as examples: it is necessary that the task be in each case considered with reference to local conditions. It should be fixed, in the first instance, by the Sub-Divisional Officer in consultation with the Deputy Commissioner, on the basis of ensuring to workers wages on the D scale, increasing gradually to the B scale as the work done approximates to a full day's work.

26. Work should be laid out well in advance of the workers, and the work agents must be held responsible for this. In embanking roads with dry earth it is very necessary to have the earth broken up very small, and there are plenty of people to do it. The made road should be constantly dug up and examined; if the earth has been left in clods it is always the fault of the mate, and the adult carriers and breakers. In that case these only (namely, all the working adults of a gang other than the diggers who have done their allotted tasks) should be fined, and not the diggers. A very few days of persistent, but not too severe, discipline of this kind will put almost any gang into shape; if it does not, the mate is of no use and should be turned off.

At the rear of every relief "Charge" there should be a finishing gang, one that has shown it has learned its work well and is under an intelligent mate. It will be the duty

of this gang to properly finish up all irregularities left by the less skilful gangs in front. No particular task can be set for them, and the work very largely depends on the mate in charge, who should be a professional *tindal* on a monthly wage. The whole appearance of the work when finished depends on this part of it being properly attended to.

V.—WAGES.

27. The wages prescribed after long experience and careful observation are laid down in Articles 81 to 86 of the Famine Code and the last of those sections prescribes a scale of wages based on "grain equivalents" which is to govern the cash wages paid on these works. There are different scales of wages, and in making a selection several points have to be considered. Special care must be taken that the joint wages of a family, while sufficient for subsistence, shall not be greater than unskilled labourers can earn elsewhere. Otherwise all labour will be attracted from other work on to the Relief Works. This result would be undesirable.

28. All ordinary workers should be paid the subsistence wage; diggers and those employed in special gangs may get the *maximum* wage of class B; and mates of gangs with such other men in responsible work who the Sub-Divisional Officer considers require it, are to be paid two pice more than the diggers. The wages of workers are to be strictly regulated by the scale of grain equivalents laid down in the following paragraph. These equivalents are to be converted into money on the basis of the current retail price of the staple grain in ordinary local consumption by the labouring classes, and in the state, husked or unhusked, in which that grain is ordinarily sold by retail for consumption.

29. The following scale will therefore be used :—

Mates of gangs and other persons in responsible posts.	Six pies more than a digger.
Adult male workers. Diggers and men in special gangs.	Nineteen *chataks* of grain.
Adult males.—Other workers. All classes.	Fourteen *chataks* of grain.
Women diggers	Sixteen *chataks*.
Adult females not diggers.—All classes.	Thirteen *chataks*.
Male adult dependants	Twelve *chataks*.
Female dependants	Ten *chataks*.
Working children, grade I.—Over twelve and under sixteen years.	Ten *chataks*.
Working children, grade II.—Over seven and under twelve.	Six *chataks*.
Non-working children, grade III.—Not in arms and under seven years.	Three *chataks*.
Non-working children, grade IV.—Infants in arms.	One pice extra to the mother.

If the exact money equivalent of the preceding grain wages exceeds the nearest pice below by two pie or more, the next highest pices will be given. If the exact sum exceeds the nearest pie below by less than two pies, the next lowest pice will be given.

30. Workers who fail to perform the allotted task may be punished as follows :—

(*a*) by fine, provided that the grain ration (or its money equivalent) paid as wages shall not be less than the penal ration prescribed in Article 83, Famine Code; or

(*b*) by payment as wages of the penal ration in cooked food at a State kitchen established on the work; or

(*c*) by removal from the work and sending them to the nearest poor-house.

31. Wages are to be fixed by the Sub-Divisional Officer Engineer in consultation with the Deputy Commissioner. They are not to be altered for variations of less than 10 per cent. in the price of food-grains. Excepting in case of urgent necessity, which should be immediately reported, they are not to be altered without previous reference to the Commissioner. For the first week of a gang's existence it may, if necessary, be paid up daily. By that time the gang will have established an account and credit with some *bania* and the wages may thereafter be paid twice a week with advantage to everyone. A table or ready reckoner showing the wages to be paid in accordance with the varying price of grain is given as Appendix VIII.

VI.—Field Accounts.

32. The basis of these accounts is the "gang register," No. 1 of the Field Accounts. The most convenient form for it is given as Appendix III. This should be printed in vernacular on a sheet of ordinary country paper rather larger than the pattern and with columns for seventeen days. The paper should be mounted on cheap muslin, and on about half of the other side of the muslin should be pasted another piece of paper printed as shown on back of the example. This back part is called the "mate's list." Two such registers are kept going for each gang, not in duplicate but in alternate use. Together they last for well over a month.

33. When a gang is first formed, the "mate's list" is to be written up at once, and that copy of the "gang register" handed to the mate, who should be warned to take great care of it as his wages depend on it. The heading gives the mate's name and distinguishing number, and the name of the *moharrir* to whom consigned. Beneath is a nominal roll of the diggers, followed by one of the other adults of the gang, then a numerical list of the children of each grade. Lastly, a list of the tools to be supplied by the store-keeper. A separate slip containing an order for tools is sent with the mate, to be retained by the store-keeper as a voucher. The "mate's list" is not to be kept up as a regular nominal roll, but is merely corrected from time to time as changes occur in the gang. The mate should not be permitted to have any persons in his gang who are not entered on the list by his *moharrir*. The officer-in-charge should check a few lists nearly every day. Every officer inspecting the gangs should check a few. The list gives very little trouble, and is of constant use in examining gangs, and the entries in the register itself. The first afternoon a gang is on the works its register should be written up by the gang-*moharrir* in whose charge it may be. There is no question of fines. He compares the persons present with the entries, enquires into any differences, and makes any necessary alterations. He pays a day's wages, writes up the second copy of register, and exchanges it for the first. He tells them about tasks and fines, and goes on. The sub-overseer has meanwhile pointed out the next day's tasks and told the mate what his duties are including a word about distributing the tasks for next day overnight, conservancy, drinking-water, tool repairs and *bania's* shops.

34. After the first day the gang-*moharrir* checks attendance in the morning, and fills in the attendance entries down to the second set of totals. He calculates and enters wages on the register, tells the mate what they come to, and signs on the line left for the purpose. Some time in the afternoon the sub-overseer, or work-agent, in charge of that portion of the work, examines the work done and enters the quantity due, and that done on the appropriate line. If there has been scamping or short work, he assesses fines as noted under the Sections (23 and 24) referring to task work above, explains to the mate what they are and why inflicted, and enters the fines and his signature below. He makes a note of all such entries in his own note-book. Later on that day the *moharrir* comes round again and pays up the gang individually (the payment may eventually be made twice a week), deducting the amount of fine, if any. He enters the net amount paid, or to be paid, and signs the register. On each day that he pays the gang's wages the *moharrir* takes the copy on which he has paid and gives the other to the mate. The mate always has one copy of the register, and does not give it up excepting on the gang's wages being paid in full, less fines. The *moharrir* is obliged to recover the fines as assessed by the

sub-overseer or work-agent, and has no power to remit them. Only a written order of the officer-in-charge can remit the fines, and that order must be written on the register itself—this is necessary to prevent fraud. The copy taken away by the *moharrir* is submitted by him as his voucher for payments. Every such voucher requires to be examined by the officer-in-charge.

35. No. 2 of the Field Accounts is the *moharrir's* day-book, or daily abstract from the gang registers for each day. The form to be used is ordinary Public Works Daily Report Form 5-A slightly modified so as to record certain measurements, as shown in form given as Appendix IV.

36. The *moharrir* starts in the afternoon with a certain amount of cash, for which he leaves a receipt. At every gang he makes payments, and in each such case he takes the "gang register" held by the mate and gives him the other copy in exchange. He should enter all payments in his note-book of the day. On returning to the staff quarters he should pay in the unpaid balance of money left in his hands and put in the gang registers as his vouchers for payments. The officer-in-charge and his sub-cashier make all necessary comparisons and entries, and return him the "gang registers" signed against the last day they are paid to. The measurements in this form are to be entered by the sub-overseer or work-agent from his measurement-book.

Similar forms should, if necessary, be kept up by the water foreman, and the officer-in-charge of the hospital.

37. No. 3 of the Field Accounts is the officer-in-charge's Daily Report, which is practically the same as No. 2 except that, instead of the first column for the gang and mate, it has one column containing the *moharrir's* name. The amount entered in this form of Daily Report, which can run from one to seven days, will be the amount to enter in the Cash Book whether the payments are made daily or twice a week, and it will be attached to it as a voucher, No. 2 remaining in the Field Office.

38. With regard to work on Sunday and of payment of wages therefor, special attention is called to paragraph 2 of the North-Western Provinces orders printed as Appendix I. The same procedure is to be followed in these Provinces. The weekly return will therefore be for the week ending with Saturday.

39. The 4th Field Form is the Progress Report to be compiled in the form given as Appendix VI from the officer-in-charge's Daily Report No. 3 above. This should be made up daily by the officer-in-charge, and must be submitted without fail weekly to the Sub-Divisional Officer. The latter officer will be held responsible for sending on weekly a copy of this Progress Report to the Deputy Commissioner as required in paras. 79, 80 and 80-A of the Famine Code.

40. The 5th Field Form is a short note on Progress Report as shown in Appendix V attached, of which the Sub-Divisional Officer must submit one copy weekly to the Divisional Engineer and another without fail to the Secretary to Government, Public Works Department.

41. The Field Cash Book must be kept by the officer-in-charge, and either the original or a duplicate must be sent by him every Monday to the Sub-Divisional Officer, in whose office the accounts must be compiled as Sub-Divisional Accounts.

42. It may be necessary to strengthen the Sub-Divisional Officer, and he should have one qualified man as Accounts-clerk. The Sub-Divisional Officer should at once arrange for such temporary clerical assistance as may be absolutely necessary, and for a sufficiently qualified Accounts-clerk he may give up to Rs. 50 per month.

43. Form No 1 of these Field Accounts is being printed and will be supplied as soon as possible. Forms Nos. 2 and 3 can easily be adapted from Public Works Form 5-A. Forms Nos. 4 and 5 will now be printed and issued, and for the Cash Book the ordinary Imprest Cash Books with headings suitably altered can now be issued.

44. The above paragraphs relate to Field Accounts themselves, based on Public Works Forms. For all other accounts the ordinary Public Works procedure should be followed, but all forms used for the purpose must be distinctly headed "Famine Relief Account."

VII.—Funds and Supply of Coin.

45. It is anticipated that in many districts it may be possible to arrange with the local native bankers for the supply of funds as required from time to time by each officer-in-charge, the Sub-Divisional Officer paying to the bankers a small commission on the sums required, the bankers paying for all carriage of coin and the expense of all guards, &c. Such banker must, however, on no consideration have anything to do with paying the labourers or salaries of officials: he will be merely an agent for supplying the "officer-in-charge" with funds as required. In such cases the procedure will be as follows: The banker will, in the first instance, receive from the Sub-Divisional Officer a general order as to the probable requirements of each officer-in-charge and the approximate dates for recoupment. The officer-in-charge must prepare from time to time in the form given as Appendix IX an indent in triplicate showing the funds required, one copy of which remains in his office, one is to be given to the banker, and one to be sent with his weekly Cash Book to the Sub-Divisional Officer, who will then repay the banker the amount advanced, *plus* the commission agreed upon. The officer-in-charge must promptly enter in his Cash Book the amounts received, giving the needful receipt.

46. Where this arrangement is not possible the Sub-Divisional Officer, in consultation and with the help of the Deputy Commissioner, should select two or more Sub-treasuries as paying centres, and arrange that the tahsildar-in-charge, shall cash cheques sent him in his name, but for certain pre-arranged officers-in-charge of relief works. He should himself start each work and keep the officer-in-charge in funds while there. A few days of open work will show how things are going. When the Sub-Divisional Officer leaves the work, the probable expenditure for the next week should be computed and the officer-in-charge given enough money to keep him going for that time. After that a watch on his daily reports should be kept, and before he is out of funds, his expenditure for the next week should be calculated and a cheque for the amount sent to the tahsildar, in the name of the tahsildar but endorsed "for" the officer-in-charge to whom the money is to go. The tahsildar cashes the cheque and sends the money under guard to the officer-in-charge, who enters it in his Cash Book in the usual way.

47. Each "Charge" will require one iron safe. A safe about $2\frac{1}{2}' \times 1\frac{1}{2}' \times 1\frac{1}{2}'$ high does very well. There must also be two wooden chests, iron bound and tin-lined, with two hasps and padlocks. Size of chests about $2\frac{1}{2}' \times 2' \times 2'$ high. One of them remains on the work and holds the pice, the other is used in transporting money from the treasury.

48. At least three weeks' supply of coin should be available in local treasuries to begin with. At first it will mostly soak into circulation and disappear, but after a short time it will begin to flow back in exchange for silver.

VIII.—Checking Work, Numbers and Payments.

49. As a safeguard against fraud and an instrument of detection, the gang-register system is of much value. It is at any time possible to call up a mate, examine his register and see how the entries compare with the numbers in the gang.

50. An examination should be thorough, but mostly in the way of sampling. The progress shown should be checked by test measurements extending over the whole work in some reach, the recorded progress of which can be disentangled from the remainder. For this purpose it is well to have all the accounts of a road, or other long work, closed up at every four miles or so, and a new start made. The numbers are checked by counting the number of gangs at work along a road, &c., and sampling the entire entries in the *moharrir's* Day Book by careful comparison of about 20 per cent. of the gang registers with the entries, and also with the numbers actually found present. Look through the gang-register, and see whether there have been any recent curious fluctuations. If so, they require

explanation, and the mate's list on the back will throw some light on the subject. The general accuracy of each of the Day Books, is thus checked in turn. If not satisfied over a *moharrir's* Day Book, it is best to stay there and obtain some tangible results before going further. Supposing the Day Books have been found fairly correct, after checking a certain number of totals and the detailed calculations, the totals are then compared with the entries made in the Day Book kept by the officer-in-charge. The totals of this latter Day Book are again checked and compared with the entries in Field Form No. 4, and those again with the payments recorded in the Cash Book. The Cash Book itself is then carefully gone through as usual.

IX.—Tools and Baskets.

51. The necessity for making timely arrangements for the provision of tools, baskets, cash-chest, &c., has already been brought to the notice of Divisional Officers by the Chief Engineer under Section 47 of the Famine Code. Local conditions must be the primary factor to take into account. Sub-Divisional Officers must be held responsible for having a sufficient supply ready for the various "Charges" in their Districts.

Drinking Water.

52. To keep this pure it is necessary to guard the wells from contamination for some days before a work is started. Select some respectable, cleanly man of good caste who can be trusted to attend to the business, and make him foreman of the water arrangements. He must have a sufficient number of Brahmin and Kahar or Dhimar mates, water-carriers and distributors under him. He will require about 10 iron buckets (*dols*) of the country shape (with a round bottom) for drawing water, and about 60 kerosine tins for carrying water. This will probably be enough for a large gang to commence with, but the proportions will of course differ with the distance of the wells from the work; and in any case the staff and plant will probably have to be increased at one time or another.

53. If kerosine tins are used they require to be strengthened with an iron strap under them and a handle for carrying about. Half of the top should be cut away and hinged on again to prevent water splashing out. The water foremen should take possession of all wells close to the future work a week or so ahead of the workers, and at once put each in charge of a Brahmin with one or more assistants, and arrange so that these men shall draw water for any one who requires it: but they must *allow no one else to do so* or even to come on the well platform. From that time till the workers leave the locality each such well should remain in charge of the same set of men, and they should never allow any other person to dip a *lota* into it or to stand on the platform. The rigid preservation of the purity of their water-supply is one of the very few sanitary measures which the people will heartily approve of, and in which they will assist so far as they can do it without taking trouble.

54. The actual distribution is most readily effected by utilizing the old-established method of setting up *piaos*, or drinking places, at short distances apart. A large earthen jar, called a *gol*, is purchased for three to four annas and set up, a little aslant, on a low mud platform. By the side of it a narrow trough some five feet long is set up on two stakes, with a slight slope through it and the further end about two feet above the ground. It is important to take care that this trough shall always be of iron, never of wood.

55. The jar is filled from the kerosine tins (earthen *gharas* must never be used for carrying water in) by the water Dhimars, and by them alone; no one else may touch it. By the side of it sits the distributing Brahmin, and when any one comes for water he fills his brass pot, or *lota*, and pours water into the man's jar, or pot, by means of the trough. He must never pour directly into any man's pot or jar, but always into the trough and thence into the jar, placed below the trough and filled from it. It is important to have the trough well above the ground, so that it may not be touched by the jars or splashed from them. It is important to have the trough of iron, because if it does happen to get infected, it will, what with rust and heating in the sun when dry, almost certainly disinfect itself very soon after. The great jars, *gols*, should never be carried on to a fresh place, but should be broken up, and new ones used at each new *piao*. One such *piao* should be set up at every second furlong stone along a relief work.

56. If there are more wells than need be used, the unused ones should be guarded to keep off the workers, and so also with doubtful or tainted wells. If wells are miles apart and a doubtful one has to be used, it should be disinfected with permanganate of potassium according to Professor Hankin's instructions reprinted as Appendix II. So also if cholera should break out. If water has to be carried a long distance, it will be found best to carry it in casks fitted with brass cocks and loaded two in a cart. Wells should always be drawn on in preference to tanks, if within a practicable distance. All this organization about the water-supply may seem to involve a great deal of trouble over a small matter, but a neglect of it will have sure consequences where large bodies of people are collected together, and especially when they are famine-stricken people. These precautions are of vital importance to the public health.

XI.—HUTTING.

57. Huts or some provision of shelter will generally be required. This must be dealt with by the Sub-Divisional Officers in communication with the Deputy Commissioner and the nature of the hutting must depend to a great extent on local circumstances. The people are very ingenious in providing shelter for themselves, and a gang should be told off to do this in advance or be given some small allowance for the purpose, the actual provision being kept down to the lowest requirements. It is very easy to waste a great deal of money in providing unnecessary shelter, which the people will absorb and waste as long as they have not to pay for it. A careful check must therefore be exercised in this matter.

58. Effort will be made to procure tents enough to shelter the officials connected with the works, but there may be some left unprovided for. These should be hutted in small grass huts with the walls plastered with mud on the inside, and all other surfaces white-washed, both inside and out, with a thin wash of clay and lime, in about equal proportions, as a protection against fire. An experiment with a bundle of coarse thatching grass washed in this way will show the men what an effective protection it is. The huts should be 9′×6′ with the ordinary pent roof, and made in sections so that they can be readily dismantled and re-erected, and easily carried in an ordinary cart, or by coolies. The white-wash, and the mud plaster, should be renewed at intervals. The sides need only be 4′ high; any extra height wished for can be got by digging out the floor. The local staff of each "Charge" should be generally hutted in this way.

XII.—CONSERVANCY.

59. The conservancy of every hospital should be carried out by its own staff of sweepers under the directions of the officer in medical charge. For the staff there should be the usual screen and ditch, and the officer-in-charge should be instructed to have it well looked after for his own sake. It has not been found practicable to make any latrine arrangements which the workers can be induced to use. The most that can be done is to post a few stalwart men, under a competent mate of their own class, to insist on the workers going at least 300 yards off the work in their morning walks. They should generally go to the east of the work, but if there is a village near on that side they should be made to go in the other direction. The Police cannot be spared for this work or advantageously employed on it. It is of great importance to the health of the workers, and if worried into it for a short time they at last accept it as an admitted custom (*dastur*), and give very little more trouble about it. Any officer-in-charge who will take the trouble can enforce the system and keep it going.

60. There must always be deaths on these works; if unhappily an epidemic should break out there will be numerous deaths, and the disposal of the dead is a matter that must be attended to. The workers will not attend to it properly: in general, they have not the means, and many of them do not seem to care much more in the matter than to get rid of the body in some moderately respectable manner. They will bury a body just under the surface, or they will just singe it and throw it into any accessible running water. At every three or four miles of a relief work there should be a burying-place for

Hindus and another for Muhammadans. The two places should, if possible, be on some locally accustomed spot, they should be far apart, and neither should be near a village nor within half a mile of the work. Each should have a very small appropriate staff.

61. In an epidemic it is difficult to find wood enough to burn bodies. At the police guard, or other convenient place, there should be arrangements for the burial free of charge, of every Hindu body which friends do not bind themselves to burn. For the Muhammadan cemetery there should be one or two grave-diggers, preferably of the *Gorkund* class, who would keep a certain number of graves ready dug. The grave should be not less than 5′ deep, and the dead should be completely and decently covered in. Unclaimed bodies should be taken charge of by the police and buried.

62. If this organization is got into train from the first it will be ready against the occurrence of an epidemic, and it can then be extended to any required extent. But if a skeleton organization is not ready, then it cannot be improvised in the rush of an epidemic, and corpses will be thrown into every adjacent stream or *nullah*, or left lying about in the fields.

XIII.—Field Hospitals.

63. Assistant Surgeons or Hospital Assistants are deputed to these works by the Administrative Medical Officer, and their arrangements are looked after by the Civil Surgeon of the district. It is the business of the Public Works to construct field hospitals at sites selected by the Civil Surgeon, and on a plan approved by him. The plan must be as simple as possible, and so arranged that the whole can be burnt down when the structure is abandoned for a fresh one; while at the same time there must be provision for the patients to get quickly out of the enclosure if it catches fire while in use. This will be secured by forming one side of the enclosure of a mud, or clod, wall with a gate-way in the middle, and kept quite clear of hutting. The other three sides may consist of huts; but if the enclosure is entirely surrounded by hutting, the occurrence of a fire will lead to many patients being burnt to death. All the grass hutting should be white-washed with a thin mixture of lime and clay.

64. There must always be a spare hospital ahead of the one in use, so as to be ready for an epidemic. An abandoned hospital must be immediately burned to the ground. If it has held patients suffering from epidemic disease, the site of the burnt hospital should be sprinkled over with about six cubic feet of quick lime sifted evenly over it and the whole then well sprinkled over with water enough to wet the lime thoroughly.

65. Sufficient attendants, carriers and others, should be supplied to the hospital assistant or other officer in medical charge according to the scale laid down by the Civil Surgeon in each case. Relatives of patients should not be allowed to swarm round them and only so many should be admitted as the Civil Surgeon directs. No other relatives than those admitted under the Civil Surgeon's regulations should be given even a famine minimum wage so long as they idle at the hospital in pretended attendance on a patient. The hospital water-supply should be worked by its own staff and not in conjunction with the general supply for the relief workers. This is an important point and it will require some insistance to keep the two quite separate.

XIV.—Food.

66. So far as present experience has shown, there is no reason to expect any deficiency in the actual supply of food; but it is desirable that the quality should be looked into very frequently, and immediate action taken against anyone found selling unsound food. The food trade on a full sized famine relief charge is greater than that in any ordinary small Indian town, and if special facilities are given to respectable local traders they will be careful not to lose them by selling unsound food, or worrying the people with needlessly frequent changes in their prices. Following the principles of Article 74, Famine Code, the undermentioned advantages can be offered, among others, in exchange for fair trading:—a

small grass hut for a shop situated near a *piao*, and within the range of the treasure or other guards; free carriage of grain from the nearest mart, if the trader is willing to sell at the current rates of that mart; prompt and free exchange of all his copper into silver paid into the local treasury to his credit. It is usually quite easy to find several respectable men who can understand the value of such advantages to their trade, and are willing to give honest goods and reasonably steady prices in exchange for them, so long as they are pretty closely looked after. But it may occasionally occur that a relief work is situated in such a remote locality that private traders are unwilling to go there without other inducements than those noted above. In that case, or in similar exceptional cases requiring exceptional treatment, the Collector of the district would be justified in contracting with a grain-dealer for the supply of grain on the works for a stated period and on terms to be mutually agreed upon.

LIST OF APPENDICES.

I.—G. O., Scarcity Department, North-Western Province's No. 249, dated the 26th November, 1896.

II.—Professor Hankin's instructions for the disinfection of wells.

III.—The Gang Register and Mate's List. Field Account Form No. 1.

IV.—The *Moharrir's* Day Book. Field Account Form No. 2.

V.—Progress Report. Field Account Form No. 5.

VI.—Weekly Report for Deputy Commissioner and Divisional Engineer. Field Account Form No. 4.

VII.—Form of Appointment for Work Agent.

VIII.—Wages Ready Reckoner.

IX.—Indent for Supply of Coin.

APPENDIX I.

No. $\frac{249}{S-8}$, dated the 26th November, 1896.

From—H. F. EVANS, ESQ., *Chief Secretary to Government, N.-W. P. and Oudh,*
To—Commissioners of Divisions, N.-W. Provinces and Oudh.

SIR,—I am directed to reproduce below, for information and guidance, the following extract from paragraph 28 of Resolution No. $\frac{3045S}{1-58}$, dated 20th October, 1896, on scarcity and relief operations in the North-Western Provinces and Oudh during the spring and summer of 1896, and to request that the points (i) to (xvi) noted may be regarded as instructions and carried into effect so far as practicable.

2. In regard to Article 68 of the Famine Code, I am to say that practical experience has shown that demoralizing consequences flow from the payment of a wage to capable workers for which no labour is rendered. It would seem that the Article was introduced into the Code to prevent the establishments being called on to measure up work or make payments on the Sunday, not because it was considered right to prevent Hindus or Muhammadans from working on a day which for them is not sacred, but there should be no difficulty in so arranging that work done on a Sunday should be laid out on the preceding Saturday and not measured or paid for before Monday. The Lieutenant-Governor therefore desires that no wage shall be paid for Sunday to any one, not being a "dependant," who does not earn it by doing the prescribed task. For prescribed work done on Sunday the labourer will be paid on the next pay day. It shall be in the discretion of the gangs to suspend work on Sunday if they wish, forfeiting their wage for that day if they do.

3. The following instructions will be observed by all officers engaged in relief operations:—

(i) Test works fail to fulfil their object if full tasks are not exacted, and if wages are not regulated with reference to the provisions of Chapter VII of the Famine Code. Close supervision is therefore essential.

(ii) Where test works show the necessity of relief works, the management of the latter, not being of the kind specified in Article 6 II *c.*, Famine Code, should be entrusted from the outset to the Public Works Department.

(iii) Relief works of the kind specified in Article 6 II *c.*, Famine Code (*i. e.*, "work specially intended for the relief of the agricultural population in the vicinity of their villages"), are best carried out through the agency of the village landlords and head-men. The quantity of work to be done can usually be accurately calculated beforehand and the cost fixed with reference to a fair task and the current price of food. Advances can then be made and the account cleared up on completion of the work.

(iv) Article 50 of the Famine Code provides that over each separate work managed by the Public Works Department shall be placed an "officer-in-charge." The number of labourers under an officer-in-charge should ordinarily not exceed 5,000; and if there are more than 3,000 there should also ordinarily be two sub-overseers or work agents. In every case each sub-overseer or work agent should have an intelligent assistant or "mate" to help him to lay out the work. For every five or six "Charges" an inspecting officer of the standing of a Public Works upper subordinate is required.

(v) Officers of the naib-tahsildar class or of similar standing on the regular establishment of Government should, whenever possible, be employed as "officers-in-charge." They should be placed at the disposal of the Public Works Department and employed where required, postings being made by the Superintending Engineer.

(vi) Reserves of tools and baskets should be established at convenient centres, whence they can quickly be sent where wanted; and as baskets wear out quickly and take time to procure, arrangements should be made in advance for their supply.

(vii) On relief works the "gang system" should be rigidly enforced from the very outset, and gang registers kept up. A gang register is a card or piece of stout paper containing the names and classification of all persons in the gang. Any gang can thus at any time be checked independently of other gangs, and by "sampling" a few gangs, the whole work may be effectively checked. These great advantages do not attach to the alternative "ticket system," under which vouchers are delivered to individuals in the morning to be exchanged for money in the evening. Under the "ticket system," it is obligatory to count and classify at a particular time in the afternoon the whole of the persons present on a work, in order to obtain a satisfactory check; and this has been found to be not only extremely laborious, but usually impracticable.

(viii) Wells likely to be used for drinking water by labourers on relief works should be examined and, if found pure, should be guarded from contamination for a week before required, and the water-supply arrangements perfected before the labourers arrive. Foul wells should be absolutely closed. Should cholera break out the wells should be disinfected at intervals of two or three days with permanganate of potash, until the labourers are split up and drafted off to other works.

(ix) From the labourers Brahmans should be selected to draw water from the wells for Hindus, and Kahars to distribute it. The vessels employed in drawing and distributing the water should be ordinarily of metal and scrupulously clean. Kerosine tins have been found to be most useful and acceptable.

(x) A superior medical officer should inspect periodically (1) the relief labourers on relief works not of the Article 6 II (*c*) class, (2) the sanitary and medical arrangements in connection with such works, and (3) poor-houses and hospitals.

(xi) The Famine Code (Section 70) provides for the erection of latrines. These should usually be on the trench system and provided with grass screens. A line of flags and posts should be placed all round each relief work, and 300 yards from the same, and great care should be taken that no nuisances are committed within the area enclosed by such flags and posts.

(xii) Medical officers in charge of hospitals on relief works should very carefully watch for the occurrence of any cases of relapsing or famine fever, and immediately isolate any such cases. Provision for the immediate isolation of cases of cholera, small-pox, or other epidemic disease should be made at each work. Grass huts, which can be subsequently burnt, will usually be the best form of isolation hospital.

(xiii) Article 63 of the Code provides for daily, bi-weekly, or tri-weekly payments (with certain exceptions). Wages should ordinarily be paid twice a week. Bi-weekly payments save the labourers a daily wait until a late hour on the works. They also reduce the difficulty of providing a sufficient supply of copper coin, as small silver coin can then be used also. But bi-weekly payments can only be introduced if "gang registers" are maintained in perfect order. (The difficulty, which is sometimes serious of providing large quantities of copper coin, can be reduced by arranging with the gram-sellers on the works to exchange copper for silver daily.)

(xiv) No change in wages should be made if prices vary by less than 10 per cent., and ordinarily no change should be made unless with the previous sanction of the Commissioner of the Division (or Famine Commissioner, if one is appointed).

(xv) When a variation in prices of food-grain necessitates an alteration in wages, notice of the new rate of wages should be sent to the District Engineer and not to the "officers-in-charge."

(xvi) No incomplete work should be closed by the controlling authorities, except on account of sickness, unless seven days' notice be previously given to the Divisional (Executive) Engineer to break up the staff and close the work.

NOTE.—The Articles referred to are those of the Central Provinces Famine Code.

APPENDIX II.

Directions for treatment of wells with permanganate of potassium, as a means of checking epidemics of cholera.

PERMANGANATE of potassium is a crystalline salt-like substance, of a purple colour, in whose preparation only mineral substances are employed. Hence its use in wells need not be objected to by the strictest Hindu.

Put one or two ounces of the solid substance into a *dol* or bucket that has been filled with water drawn from the well about to be treated. Stir it up, and pour the red solution thus produced into the well, leaving the portion of permanganate that is not yet dissolved at the bottom of the *dol*. Lower the *dol* into the well, fill it with water, draw it up, pour back the water as before. Repeat the process till all the permanganate has been dissolved. After half an hour draw up some of the water and examine it. If a red colour is still present, enough has been added. If the red colour has disappeared, then more permanganate should be added to the water in the well. In all cases enough permanganate should be added to produce a faint red colour lasting for 24 hours.

If the water in the well is bad, more permanganate will be necessary. In such a case it will be found that the strong red colour at first produced quickly changes to brown and then fades away. This is because the permanganate destroys dirt and is destroyed by it. Therefore if the water in the well is clean, a smaller quantity of permanganate will be necessary. From one to four ounces of permanganate will be found to be enough for ordinary wells. If more permanganate is added than is enough to produce a faint permanent red colour, it is likely that frogs that may be in the well will be killed. This will in a few days give the water a putrid taste. If the quantity of permanganate is not enough to produce a faint permanent red colour, it is not likely to do any good. If possible the permanganate should be added at night in order to leave the wells undisturbed as long as possible. The water will be fit to drink on the following morning. If on the following morning a red colour is still present, the water may have an unpleasant taste, but it is perfectly harmless. If the inhabitants do not like the taste, they should be instructed to pump out the water until the colour vanishes. Always care should be taken to treat with permanganate all the wells in the place, not only those used for drinking, but also those used for washing purposes. Care should be taken to explain to the inhabitants the reason of using permanganate, and they should be warned against using water from other sources that have not been treated. If one well is required for immediate use, perhaps it would be advisable to add to it a quantity of permanganate, and to employ *bhishtis* to draw out the water until the colour has disappeared, but this well should again be treated with permanganate on the following day when the other treated wells are brought into use.

Usually water is kept stored in the houses for washing or other purposes in *gharas*, &c. This should be poured away, and, if possible, the inhabitants should be persuaded to wash out their *lotas* and other vessels with water containing permanganate. Unless this is done, isolated cases of cholera are likely to occur even four or five days after the treatment of the wells. I have had experience of a case in which a woman was attacked with cholera after treatment of wells, because she was frightened of touching the red water in the well, and drank water that had been stored in the house and that had been taken from the well before the addition of the permanganate.

A pamphlet explaining the use of permanganate, entiled "The Prevention and Cause of cholera," may be obtained from the undersigned in Urdu, Hindi and English. It is being translated by various Local Governments into Burmese, Tamil, Telugu, Malayalam, Uriya, Marathi, Gujrati, Kanarese and Sindhi.

E. H. HANKIN,

Chemical Examiner, and Bacteriologist, N.-W. P. and Oudh.

FAMINE RELIEF WORKS, CENTRAL PROVINCES.

FIELD ACCOUNTS FORM No. I.

*Gang Register of No.*_____ *Mate*_____ *Month*_____ *District*_____

Name of Work.

	Items.	Day and date.																	
		Wage in pice.	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.
Workers.	Men, B, diggers and special.																		
	Do., B, others ...																		
	Do., D ...																		
	Women, B, diggers ...																		
	Do., B, others ...																		
	Do., D ...																		
	Children, I (12 to 16) ...																		
	Do., II (7 to 12) ...																		
	Totals ...																		
Gratuitous.	Men ...																		
	Women ...																		
	Children, III * ...																		
	Do., IV (Infants) ...																		
	Totals ...																		
Signature of Gang-*Moharrir* ...			due.	done.															
Task in cubic feet ...			No.	Amount.															
Fine inflicted ...																			
Number of persons and amount ...																			
Signature of Sub-Overseer ...																			
Amount paid ...																			
Signature of Gang-*Moharrir* ...																			

Note.—(1). Officer-in-charge, or his sub-cashier, to sign against the last payment recouped to the Gang-*Moharrir*.

(2). Continue the form to hold 17 days.

* Grades III and IV of the children not to be separately entered so long as they get the same wage.

MATE'S LIST.

(To be pasted on the back of the Gang Register.)

*Gang No.*_____ *Mate's Name* _____.

Name of Gang-Moharrir _____

Moharrir to sign and date entries and alterations on each occasion.

APPENDIX IV.

FAMINE RELIEF WORKS, CENTRAL PROVINCES.

Field Account Form No. 2.

Day Book of *Gang-Moharrir.* *Day and Date.*

Name of Work *District.*

PART I.—Daily Report of Labour employed.

Number of Gang and description of work.	Date.	At Re. 0-2-3.	At Re. 0-1-9.	At Re. 0-1-3.		At Re. 0-1-6.	At Re. 0-1-3.	At Re. 0-1-0.	At Re. 0-0-6.			At Re. 0-1-3.	At Re. 0-1-0.	At Re. 0-0-3.	At Re. 0-0-3.	At	Total charges.	Quantity of work done.
		WORKERS.										DEPENDANTS.						
Relief Camp No.		Mate.	Men diggers.	Other men.		Women diggers.	Other women.	Children I, 12—16.	Children II, 7—12.			Men.	Women.	Children III, under 7.	Children IV, in arms.			
Gang No. 1	1st	1	20	5		10	20	10	10			5	5	5	5			
	2nd	1	20	5		10	20	10	10			5	5	5	5			
Soft Earthwork	3rd	1	20	5		10	20	10	10			5	5	5	5			
		3	60	15		30	60	30	30			15	15	15	15			
Task for full Wage—																		
	C.ft.																	
60 Men diggers at 90 =	5,400																	
30 Women diggers at 45 =	1,350																	
Total ...	6750																	
	Rs a. p.	0 6 9	6 9 0	1 2 9		2 13 0	4 11 0	1 14 0	0 15 0			1 2 9	0 15 0	0 3 9	0 3 9	21 0 9	Rs. a. p.	C.ft.
		At Re. 0-1-9.	At Re. 0-1-3.	At Re. 0-1-3.		At Re. 0-1-3.	At Re. 0-1-3.	At Re. 0-1-0.	At Re. 0-0-6.			At Re. 0-1-3.	At Re. 0-1-0.	At Re. 0-0-3.	At Re. 0-0-3.		21 0 9	6,750
Gang No. 2	1st	1	20	5		10	20	10	10			5	5	5	5			
Soft Earthwork	2nd	1	20	5		10	20	10	10			5	5	5	5			
	3rd	1	20	5		10	20	10	10			5	5	5	5			
		3	60	15		30	60	30	30			15	15	15	15			
Task for full Wage—																		
	C.ft.																	
60 Men diggers at 90 =	5,400																	
30 Women diggers at 45 =	1,350																	
Total ...	6,750																	
	Rs a. p.	0 5 3	4 11 0	1 2 9		2 5 6	4 11 0	1 14 0	0 15 0			1 2 9	0 15 0	0 3 9	0 3 9	18 8 9	Rs. a. p.	C.ft.
		At Re. 0-1-9.	At Re. 0-1-3.	At Re. 0-1-3.		At Re. 0-1-3.	At Re. 0-1-3.	At Re. 0-1-0.	At Re. 0-0-6.			At Re. 0-1-3.	At Re. 0-1-0.	At Re. 0-0-3.	At Re. 0-0-3.		18 8 9	6,000
																GRAND TOTAL ...		

Day Book of *Gang Moharrir* *Day and Date.*

Name of work *District.*

PART I.—Daily Report of Labour employed.

Number of Gang and description of work.	Date.	Workers.									Dependants.					Total charges.	Quantity of work done.
		At Re. 0-2-3.	At Re. 0-1-9.	At Re. 0-1-3.		At Re. 0-1-6.	At Re. 0-1-3.	At Re. 0-1-0.	At Re. 0-0-6.		At Re. 0-1-3.	At Re. 0-1-0.	At Re. 0-0-3.	At Re. 0-0-3.	At		
Relief Camp No.		Mate.	Men diggers.	Other men.		Women diggers.	Other women.	Children I, 12—16.	Children II, 7—12.		Men.	Women.	Children III, under 7.	Children IV, in arms.			

Day Book of *Gang Moharrir* *Day and Date.*

Name of work *District.*

PART I.—Daily Report of Labour employed.

Number of Gang and description of work.	Date.	WORKERS.										DEPENDANTS.					Total charges.			Quantity of work done.
		At Re. 0-2-3.	At Re. 0-1-9.	At Re. 0-1-3.		At Re. 0-1-6.	At Re. 0-1-3.	At Re. 0-1-0.	At Re. 0-0-6.			At Re. 0-1-3.	At Re. 0-1-0.	At Re. 0-0-3.	At Re. 0-0-3.	At				
Relief Camp No.		Mate.	Men diggers.	Other men.		Women diggers.	Other women.	Children I, 12—16.	Children II, 7—12.			Men.	Women.	Children III, under 7.	Children IV, in arms.					

Day Book of *Gang Moharrir* *Day and Date.*

Name of work *District.*

PART I.—Daily Report of Labour employed.

Number of Gang and description of work.	Date.	WORKERS. At Re. 0-2-3. Mate.	At Re. 0-1-9. Men diggers.	At Re. 0-1-3. Other men.	At Re. 0-1-6. Women diggers.	At Re. 0-1-3. Other women.	At Re. 0-1-0. Children I, 12—16.	At Re. 0-0-6. Children II, 7—12.	DEPENDANTS. At Re. 0-1-3. Men.	At Re. 0-1-0. Women.	At Re. 0-0-3. Children III, under 7.	At Re. 0-0-3. Children IV, in arms.	At	Total charges.	Quantity of work done.
Relief Camp No.															
GRAND TOTAL ...															

Day Book of *Gang Moharrir* *Day and Date.*

Name of work *District.*

PART I.—Daily Report of Labour employed.

Number of Gang and description of work.	Date.	WORKERS.									DEPENDANTS.					Total charges.	Quantity of work done.
		At Re. 0-2-3.	At Re. 0-1-9.	At Re. 0-1-3.		At Re. 0-1-6.	At Re. 0-1-3.	At Re. 0-1-0.	At Re. 0-0-6.		At Re. 0-1-3.	At Re. 0-1-0.	At Re. 0-0-3.	At Re. 0-0-3.	At		
Relief Camp No.		Mate.	Men diggers.	Other men.		Women diggers.	Other women.	Children I, 12—16.	Children II, 7—12.		Men.	Women.	Children III, under 7.	Children IV, in arms.			

PART II.—Detail of Measurement of work done by the Labour employed.

Description of Work.	No.	Measurement. L.	B.	D.	Cubical contents.	Superficial contents.	Deduct as shown last report.	Balance this report.
Gang No. 1.—Soft Earthwork ..	2	100	20	1½	6,000			
	2	15	20	1½	750			
					6,750			
Gang No. 2.—Soft Earthwork ...	2	100	20	1½	6,000			

The measurements were made by on the and are recorded at page

* of Measurement book No.

Officer-in-charge. *Sub-Divisional Officer.* *Sub-Overseer or Work Agent.*

PART II.—Detail of Measurement of work done by the Labour employed.

Description of Work.	No.	Measurement.			Cubical contents.	Superficial contents.	Deduct as shown last report.	Balance this report.
		L.	B.	D.				

The measurements were made by on the and are recorded at page of Measurement Book No.

Officer-in-charge. *Sub-Divisional Officer.* *Sub-Overseer or Work Agent.*

APPENDIX V.

FAMINE RELIEF WORKS, CENTRAL PROVINCES.

Field Account Form No. 5.

_____District.

Note for the information of the Secretary to the Chief Commissioner, Public Works Department, Central Provinces.

(To be posted weekly direct to the Secretary to the Chief Commissioner, Public Works Department, commencing with the week ending Saturday, December 26th, 1896.)

Despatched on Monday or Tuesday, the_____of_____.

Number.	The number of persons employed on Famine Relief Works for the week ending Saturday, the_____of_____, has an average of_____(approximate daily).
Approximate Expenditure.	The approximate expenditure on Famine Relief Works has been Rs._____.
Increase or Decrease.	Persons are $\frac{\text{still coming in.}}{\text{not coming in.}}$
Condition.	The condition and health of persons employed is $\frac{\text{good.}}{\text{not good.}}$ The new arrivals are— (*a*) Fairly healthy, (*b*) Weakly, (*c*) Emaciated.
Ordinary Works.	The approximate number of persons on ordinary works (give name) and the payments made by me (or bills issued) amount to Rs._____.
Prices of Food.	The price of common grain (*viz.*,_____ _____) is Rs. per seer. Supplies are $\frac{\text{sufficient.}}{\text{insufficient.}}$

General Remarks.

The following works have been started :—

1.

2.

3.

4.

5.

6.

The following works have been visited by me :—

1.

2.

3.

4.

5.

6.

I find $\frac{\text{difficulty}}{\text{no difficulty}}$ in providing work for all persons coming in.

District Sub-Divisional Officer.

FAMINE RELIEF WORKS.

CENTRAL PROVINCES.

District Sub-Divisional Office.

No._____.

*Dated*_____ 189 .

SUBMITTED to the Secretary to the Chief Commissioner, Public Works Department, in accordance with para._____, dated_____ _____1896.

District Sub-Divisional Officer,

_____*District,*

Notes for preparation of the form.

1.—The officer-in-charge will fill up the form on reverse and forward it weekly to the District Sub-Divisional Officer.

2.—The serial order of works, column 1, should be kept the same, each new work starting with a new serial number and keeping it till closed.

3.—If wages are given for Sunday, the attendance for Sunday must be counted in as well (*vide* paragraph 67 of rules).

4.—All entries in columns 12 to 15 must be to the nearest rupee, omitting fractions of a rupee.

5.—The abstract on front page will be filled in by the District Sub-Divisional Officer.

APPENDIX VI.

FAMINE RELIEF ACCOUNTS.

CENTRAL PROVINCES.

Form No. 4.

Week ending Saturday,

The _____ 189 .

_____ *District.*

_____ *Division.*

No. _____, *dated* _____ 189 .

FORWARDED to the Deputy Commissioner, District and Divisional Engineer.

ABSTRACT.

Week's wages to workers only (total at foot of column 12) .. Rs.———

Quantity of work done (total at foot of column 11) ...Cubic ft.——

Rate per 1,000 cubic feet ...Rs.———

Number of units relieved (total at foot of column 9) ...No.———

Wages and gratuitous relief for week (totals of columns 12 and 13 added together) ...Rs.———

Rate per unit ...Pies-———

WEEKLY REPORT FOR DEPUTY COMMISSIONER AND DIVISIONAL ENGINEER.

_____ DISTRICT. RELIEF WORKS. _____ DIVISION.

Progress Return for Week ending _____ 189 .

Serial number.	Name of work.	Total of all classes employed.			Total of all classes gratuitously relieved.			Grand Total of all persons on the work.	Work done during week.		Payments during week.				Capacity for further employment at date.		Remarks.
		Men	Women.	Children.	Men.	Women.	Children.		Nature.	Quantity.	Wages	Gratuitous relief.	Other items.	Total.	Number of persons.	Period in days.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	Totals ...																

Dated at _____, *the* _____ *of* _____ 189

Officer-in-charge.

OFFICER-IN-CHARGE.

WEEKLY REPORT BY S.-D. O. FOR PERIOD ENDING SATURDAY,

_____189

1. Condition of the relief workers.

2. Outburst of disease.

3. Efficacy of food and water-supply arrangements. Grain used as basis of wages, and its equivalent in seers per rupee.

4. Sufficiency of staff and organization of gangs.

5. Succinct notes on work personally inspected, and anything which should be brought to notice on the Famine Relief Works.

*Dated at*_____

*The*_____189

Officer-in-charge.

APPENDIX VII.

FAMINE RELIEF WORKS, CENTRAL PROVINCES, PUBLIC WORKS DEPARTMENT.

Form of Appointment of a member of the Work Establishment.

(To be prepared and signed in triplicate, one copy to be given to the person appointed, one copy to be transmitted to the Examiner, Public Works Accounts, and one copy to be recorded in the office of the authority making the appointment.)

From

THE DIVISIONAL ENGINEER,

Public Works Department.

To

_____

_____

No._____.

*Dated at*_____, *the*_____*of*_____189 .

Under sanction conveyed in G. O. No. C.-498, dated 26th December, 1896, you are hereby appointed a member of the Work Establishment of the_____ Division, Public Works Department, in the Central Provinces, as a_____ on a consolidated salary of Rupees (_____)_____per month with effect from the morning of the day you enter upon your duties under the District Sub-Divisional Officer of_____to whom you should report yourself without delay.

2. Your appointment will cease on receipt of a written notice from the District Sub-Divisional Officer. If he considers your conduct and work have been satisfactory, he is empowered to then pay you a sum equivalent to your salary for ten to fourteen days in lieu of travelling allowance to enable you to return home. This cannot be claimed as a right.

3. You are liable to summary dismissal at any time without notice for serious misconduct or incompetence proved to the satisfaction of the District Sub-Divisional Officer.

4. Should it be desirable to retain your services after the cessation of the work or works on which you were engaged, you will be placed in charge of such works by the District Sub-Divisional Officer.

5. While in Government employ you will be subject to and governed by the Rules. for the time being in force in the Public Works Department, supplemented by such other orders as you may from time to time receive from the officer under whom you are serving.

6. Your salary is consolidated and includes all charges, and you will not be entitled to any travelling or other allowances.

7. This appointment is cancelled should you fail to join by_____.

_____

Divisional Engineer.

(Declaration by person appointed.)

I hereby accept the appointment conferred on me in the above order, the terms of which I clearly understand and agree to; and I hereby bind myself to observe and abide by the Rules referred to in paragraph 5 of the said order.

*(Signature)*_____.

*Dated at*_____, *the*_____*of*_____189 .

WAGES READY RECKONER.

Table showing the wages to be paid to the various classes of persons on Famine Relief Works (paragraphs 59 and 60), being the money equivalents payable on the basis of the current retail price of the staple grain in ordinary local consumption by the labouring classes, and in the state, husked or unhusked, in which that grain is ordinarily sold by retail for consumption (paragraph 58).

Description of persons in receipt of relief.	Basis of the wage.	Retail price of the ordinary grain as above.											
		12 *sers* per Re.	11 *sers* per Re.	10 *sers* per Re.	9½ *sers* per Re.	9 *sers* per Re.	8½ *sers* per Re.	8 *sers* per Re.	7½ *sers* per Re.	7 *sers* per Re.	6½ *sers* per Re.	6 *sers* per Re.	5½ *sers* per Re.	5 *sers* per Re.
		The wages to be paid.												
		A. P.	A. P.	A. P.	A. P.	A. P.	A. P.	A. P.	A. P.	A. P.	A. P.	A. P.	A. P.	A. P.
WORKERS.														
Mates of gangs and other workers in responsible posts ...	Six pies more than a digger ...	2 0	2 3	2 3	2 6	2 6	2 9	2 9	3 0	3 3	3 6	3 9	4 0	4 3
Adult males. Diggers and men in special gangs ...	19 *chataks* of grain ...	1 6	1 9	1 9	2 0	2 0	2 3	2 3	2 6	2 9	3 0	3 3	3 6	3 9
Adult males. All other workers	14 *chataks* of grain ...	1 3	1 3	1 3	1 6	1 6	1 6	1 9	1 9	2 0	2 0	2 3	2 6	2 9
Adult females. Diggers	16 *chataks* of grain ...	1 3	1 6	1 6	1 9	1 9	1 9	2 0	2 0	2 3	2 6	2 9	2 9	3 3
Adult females. All other workers... ...	13 *chataks* of grain ...	1 0	1 3	1 3	1 3	1 6	1 6	1 6	1 9	1 9	2 0	2 3	2 3	2 6
Children. Grade I (over 12 and under 16 years) ...	10 *chataks* of grain ...	0 9	0 9	1 0	1 0	1 0	1 3	1 3	1 3	1 6	1 6	1 9	1 9	2 0
Children. Grade II (over 7 and under 12 years) ...	6 *chataks* of grain ...	0 6	0 6	0 6	0 6	0 9	0 9	0 9	0 9	0 9	1 0	1 0	1 0	1 3
DEPENDANTS.														
Adult males	12 *chataks* of grain ...	1 0	1 0	1 3	1 3	1 3	1 3	1 6	1 6	1 9	1 9	2 0	2 3	2 3
Adult females	10 *chataks* of grain ...	0 9	0 9	1 0	1 0	1 0	1 3	1 3	1 3	1 6	1 6	1 9	1 9	2 0
Children. Grade III (not in arms under 7 years) ...	3 *chataks* of grain ...	0 3	0 3	0 3	0 3	0 3	0 3	0 3	0 3	0 6	0 6	0 6	0 6	0 6
Children. Grade IV (infants in arms) ...	One pice extra to the mother ...	0 3	0 3	0 3	0 3	0 3	0 3	0 3	0 3	0 3	0 3	0 3	0 3	0 3

APPENDIX IX.

FAMINE RELIEF, C. P.
(ORIGINAL.)

District

Officer-in-charge

Name of work

INDENT No.

To Agent of

Please supply the following coin :—

	Total. Rs.	A.	P.
.....Rupees ...			
.....Eight anna pieces ...			
.....Four „ „ ...			
.....Two „ „ ...			
.....Half „ „ ...			
.....Quarter„ „ ...			
Total Rs. ...			

Officer-in-charge.

Date

Received Rs. A. P.

Officer-in-charge.

Date

FAMINE RELIEF, C. P.
(DUPLICATE.)

District

Officer-in-charge

Name of work

INDENT No.

To Agent of

Please supply the following coin :—

	Total, Rs.	A.	P.
.....Rupees ...			
.....Eight anna pieces ...			
.....Four „ „ ...			
.....Two „ „ ...			
.....Half „ „ ...			
.....Quarter„ „ ...			
Total Rs. ...			

Officer-in-charge.

Date

Received Rs. A. P.

Officer-in-charge.

Date

FAMINE RELIEF, C. P.
(TRIPLICATE.)

District

Officer-in-charge

Name of work

INDENT No.

To Agent of

Please supply the following coin :—

	Total. Rs.	A.	P.
.....Rupees ...			
.....Eight anna pieces ...			
.....Four „ „ ...			
.....Two „ „ ...			
.....Half „ „ ...			
.....Quarter„ „ ...			
Total Rs. ...			

Officer-in-charge.

Date

Received Rs. A. P.

Officer-in-charge.

Date

CENTRAL PROVINCES, PUBLIC WORKS DEPARTMENT.

Chief Engineer's Office.

No. $\frac{2}{1}$.

FROM

E. E. OLIVER, ESQ., M. INST. C. E.,

CHIEF ENGINEER,

Central Provinces,

To

ALL EXECUTIVE ENGINEERS OF DIVISIONS,

Central Provinces.

Dated Nagpur, the 2nd January 1897.

Famine Relief Works.

SIR,

With reference to the estimates to be submitted for Famine Relief Works, I have the honour to request your attention to the following instructions:—

(*a*) Estimates for the actual expenditure already incurred or to be incurred on tools and plant should be submitted by Divisions, supplementary or revised estimates being sent in from time to time as may be required to cover further expenditure.

The whole of this expenditure will, for the present, be debited to Relief Funds, and when the works are closed the balance of serviceable tools and plant may be brought on the Divisional stock register at market valuation.

(*b*) Estimates for special establishment should be made out by Districts and submitted for sanction from time to time.

These estimates should include all temporary establishment that does not appear on the gang registers. They should not include permanent men.

(*c*) Estimates for hutting, conservancy and medical should similarly be submitted by Districts from time to time, and should also include special temporary establishment connected therewith exclusive of persons who appear in the gang registers.

2. The above should be kept distinct from estimates for works.

I have the honour to be,

Sir,

Your most obedient Servant,

E. E. OLIVER,

Chief Engineer.

Enclosures.
Nil.

CENTRAL PROVINCES, PUBLIC WORKS DEPARTMENT.

Secretariat.

No. $\frac{70}{715}$.

FROM

E. E. OLIVER, ESQ., M. INST. C. E.,

SECRETARY TO CHIEF COMMISSIONER, CENTRAL PROVINCES,

Public Works Department,

TO

THE SUPERINTENDENT OF WORKS,
ALL EXECUTIVE ENGINEERS OF DIVISIONS, AND
„ SUB-DIVISIONAL OFFICERS,

Central Provinces.

Dated Nagpur, the 1st February 1897.

Famine Relief Works.

SIR

I am directed to forward copy of Circular No. 3-F—77-I, dated the 24th December 1896, from the Government of India, drawing attention to the importance of exacting a full task at all stages of relief operations, and to impress upon you the absolute necessity of a steady endeavour to enforce the execution of such tasks.

2. It has appeared to the Chief Commissioner in some cases that it has been too lightly assumed that the exaction of a full tale of work for the wages paid is impracticable, and that officers have failed to make that earnest effort without which any high standard of economy is impossible. There is no reason, Mr. Lyall considers, why by the exercise of tact and patience a reasonable task, adjusted to the capacity of all workers, should not be insisted on. Any undue leniency in the case of persons not performing a full task is apt to set a very bad example to those workers who have previously done such a task, and discipline becomes impossible if any set of workers are favoured in this respect above others. Special attention is invited to Article 61 of the Famine Code, which empowers the *temporary* infliction of fines below the minimum wage in case of contumacy; Article 62, which explains that fines are not to be inflicted for short work due to weakness; and Article 83, which explains what the penal ration is. It will be seen that by Article 80 (*c*) the officer-in-charge has to report weekly his action in the case of any failure to accomplish a full task. I am also to draw attention to paragraph 30 of the rules of General Order No. C-498, dated the 26th December 1896, which deals with this matter.

3. I am also to forward, for information and as suggestive correspondence in regard to the task work required from workers at Lakhnadon in the Seoni District, and the measures which have been authorized *experimentally* by the Commissioner at that place for dealing with short work. If you find it necessary to take any such action in the works in your $\frac{\text{Division}}{\text{District}}$, you should do so in consultation with the Deputy Commissioner, and the result should be carefully watched and reported for the Chief Commissioner's information, with a full account of the action taken.

I have the honour to be,

Sir,

Your most obedient Servant

E. E. OLIVER,

Secretary.

Enclosures.

1. Circular No. 3-F—77-I, dated 24-12-96.
2. Commissioner, Jubbulpore Division, No. C-14, dated 19-1-97, and its enclosures.

No. $\frac{70.}{716}$.

Dated Nagpur, the 1st February 1897.

Copy, with copies of enclosures, forwarded to $\frac{\text{all Commissioners of Divisions.}}{\text{the Commissioner of Settlements and Agriculture,}}$ $\frac{}{\text{the Chief Secretary to the Chief Commissioner,}}$ Central Provinces, for information.

E. E. OLIVER,

Secretary.

Enclosures.

Circular and correspondence

No. C-14, dated Seoni, the 19th January 1897.

From—F. C. ANDERSON, Esq., I. C. S., Commissioner, Jubbulpore Division,

To—The Deputy Commissioner, Seoni.

I have the honour to forward a Memorandum which I have drawn up on the subject of the experimental introduction of fines for wilful short work on the Public Works Department relief-work near Lakhnadon, and to request that the result of the experiment may be reported in due course. It should be specially stated whether it drives any needy labourers off the work. In that case you can reduce the half task; but I believe that the half task can easily be done by reasonable industry.

No. C-15.

Dated Seoni, the 19th January 1897.

Copy, with copy of Memorandum, forwarded to the Chief Engineer, Central Provinces, for information.

F. C. ANDERSON,

Commissioner.

Memorandum, dated the 15th January 1897, by F. C. ANDERSON, Esq., I. C. S., Commissioner, Jubbulpore Division, regarding the Public Works Department relief-work (stone breaking) near Lakhnadon.

It has been found by experience that the relief workers do not attempt to perform a reasonable task. They expect to get a minimum wage for doing as little as they can, and are content to idle and receive that wage at the end of the day. There can be no discipline under such a state of affairs, and it is necessary to apply paragraphs 61 and 62 of the Famine Code in order to correct it. These provisions of the Code authorize the infliction of fines so as to reduce the wages below the minimum wage temporarily in cases of contumacy and wilful short work. I have consulted the Executive Engineer, Plateau Division, and the Deputy Commissioner as to what is a fair task on this work, and the following is fixed as such for a gang composed as shown below:—

	Cubic feet.
20 men at 3 cubic feet per head	60
50 women at 2 cubic feet per head	100
10 children over 12 years at 1 cubic foot per head	10
10 children under 12 years, carriers	*Nil.*
90	170

It is considered that a gang of the class of labourers employed on this relief work (most of them being able-bodied) can perform this task with reasonable industry, and if they perform it, they will earn the B wage. It is also considered that if they perform less than one-half of it; they should be treated as having wilfully done short work deserving fine. It is necessary to ascertain experimentally what the effect of fine will be, and the Deputy Commissioner is therefore authorized to warn the workers in each gang that unless they perform a task of 85 cubic feet, the men and women will be fined as follows:—

	Present wage.	Wage after deduction of fine.
	A. P.	
Men ...	1 3	9 pies.
Women ...	1 0	9 „

No fines will be inflicted on the children, nor will fines be imposed in the case of any gang which has been on the work for less than 8 days. Five or six gangs may be at first selected and given two days' warning: if they fail to perform half the task on the third day, they will be fined. Five or six more gangs may then be selected and similarly warned and dealt with. Mr. Higgins will be at Lakhnadon, and he and the Sub-Divisional Officer should carry out these orders, reporting the result. They are issued experimentally, and may be modified by you in regard to the half task if that should be found excessive so as to drive needy labourers off the work.

GENERAL ORDER No. C-154.

The following orders are issued for guidance in connection with the Inspection of Famine Relief Works being carried out by the Public Works Department.

By order of the Chief Commissioner,

E. E. OLIVER,

Secretary to the Chief Commissioner, C. P.

Dated 20th March 1897.

ORDER BOOKS ON WORKS.

1. An Order Book (not an Inspection Book) is to be kept up for each separate Charge at site of works, for the use of officers empowered to give orders to the Officer-in-charge, *i.e.*,—

The Executive Engineer or Superintendent of Works.

The Sub-Divisional Officer.

The Deputy Commissioner (when he finds it necesssary to interfere).

The Civil Surgeon or Medical Officer on special Famine duty (in regard to sanitary matters only).

The Deputy Commissioners' Assistants are not authorised to give orders to the Officer in-charge direct, but they should look at the Order Book and see that orders recorded have been attended to by the Officer-in-charge, reporting to the Deputy Commissioner for the information of the Executive Engineer cases in which they have not been complied with.

INSPECTION REPORTS.

2. It is not considered necessary that Sub-Divisional Officers or Executive Engineers should write Inspection Reports. As Departmental officers responsible for the proper carrying out of the work, their business is to have put right anything they consider needs it, and to remedy deficiencies rather than report them.

Similarly the travelling auditors of accounts, although they have to bring to the notice of the Sub-Divisional Officer and Examiner of Public Works Accounts irregularities noticed by them, their primary duty is to see that the Officer-in-charge understands and carries out the orders relating to accounts. Inspection Reports should be mainly confined to the Deputy Commissioners, their Assistants, and the District Staff, or to Medical Officers so far as sanitary arrangements, water-supply, hospitals, &c., are concerned. The reports of these officers should be recorded in the attached form and sent first to the Deputy Commissioner, who will pass them on with his recommendations to Executive Engineers (or in the southern part of the Province through the Superintendent of Works) on whom the responsibility will rest of taking necessary action.

They should be ultimately filed in the Sub-Divisional Office.

3. It is not considered necessary that these Inspection Reports should go beyond the Deputy Commissioner and the Executive Engineer, who is the responsible officer. The Commissioner or the Chief Engineer can call for them if they wish in any special case.

Inspection Note by

Charge No. Date

{ Road
{ Tank

District

Division

Officer-in-charge

General Remarks

Points of Inspection.	Remarks by Inspecting Officer.
I.—Hospital arrangements.	
II.—Hospital arrangements for contagious diseases.	
III.—Latrine and conservancy arrangements, fixing of boundary flags, &c.	

Recommendation by Deputy Commissioner.	Orders issued to Sub-Divisional Officer by Executive Engineer or Superintendent of Works.

Points of Inspection.	Remarks by Inspecting Officer.
IV.—General condition and health of the coolies.	
V.—Arrangements for sending sick people found on the work to the hospitals, and their disposal and care on first arrival there.	
VI.—Water arrangements for drinking purposes.	
VII.—Kitchen arrangements.	
VIII.—Arrangements for receiving coolies when first arriving.	
IX.—Hutting arrangements and shelter against rain.	

Recommendation by Deputy Commissioner.	Orders issued to Sub-Divisional Officer by Executive Engineer or Superintendent of Works.

Points of Inspection.	Remarks by Inspecting Officer.
X.—Classification if properly carried out.	
XI.—Method of mustering.	
XII.—Method of paying wages.	
XIII.—Results of scrutiny and check of muster-rolls by actual mustering of one or more gangs and examining tickets. XIII-A.—Result of comparison of number of gangs actually at work with gangs entered as paid in Cash and Day-books.	
XIV.—Complaints by work people.	

Recommendation by Deputy Commissioner.	Orders issued to Sub-Divisional Officer by Executive Engineer or Superintendent of Works.

Points of Inspection.	Remarks by Inspecting Officer.
XV.—Method in which work is being executed.	
XVI.—Task exacted from workers.	
XVII.—Arrangement for safe custody of cash.	
XVIII.—Orders regarding lighting of fires and their prohibition near grass shelter huts, especially the hospital.	
XIX.—Checking of the entries in the Cash Book by comparing them with the *Goshwaras* or daily abstracts from which the supporting voucher is compiled. This is the most important point connected with the accounts of a Charge, and should be carefully looked into by an Inspecting Officer.	

Recommendation by Deputy Commissioner.	Orders issued to Sub-Divisional Officer by Executive Engineer or Superintendent of Works.

Points of Inspection.	Remarks by Inspecting Officer.
XX.—Checking of equipment, staff, &c.	
XXI.—Market prices; sufficiency and quantity of grain supplied.	
XXII.—Police—Reporting of vital statistics.	

Recommendation by Deputy Commissioner.	Orders issued to Sub-Divisional Officer by Executive Engineer or Superintendent of Works.

Points of Inspection.	Remarks by Inspecting Officer.
XXIII.—General.	

Forwarded to the Deputy Commissioner....., ...District.

Signature of Inspecting Officer.

Date.....

Recommendation by Deputy Commissioner.	Orders issued to Sub-Divisional Officer by Executive Engineer or Superintendent of Works.

Forwarded to the Executive Engineer.....Division.
Superintendent of Works.

Deputy Commissioner.....District.

Date.....

CENTRAL PROVINCES, PUBLIC WORKS DEPARTMENT.

Chief Engineer's Office.

No. $\frac{254}{2619}$.

FROM

E. E. OLIVER, ESQ., M. INST. C. E.,

CHIEF ENGINEER,

Central Provinces,

To

ALL EXECUTIVE ENGINEERS,

Central Provinces.

Dated Nagpur, the 10th April 1897.

Shelter for Inspecting and Executive Officers on Famine Relief duty.

SIR,

I have the honour to inform you that where no shelter, such as Dâk Bungalows or Inspection Houses, exists, or where none has as yet been provided, you should make arrangements for constructing temporary buildings for the use of Inspecting and Executive Officers on Famine Relief duty during the hot weather and rains.

The Deputy Commissioner should be consulted with a view to selecting sites at convenient places with reference to the works that will be undertaken.

The houses should be of a temporary nature with thatched roofs, plain doors and windows and wattle and daub walls, and they should be provided with a few simple articles of furniture of an inexpensive kind, and which officials would find it difficult to take with them on tour.

A rough sketch is attached, and the cost of each should not exceed Rs. 500 inclusive of accommodation for servants.

I have the honour to be,

Sir,

Your most obedient Servant,

C. O. LEEFE,

For *Chief Engineer, C. P.*

Enclosures.
1 Ferrotype.

GENERAL ORDER No. $\frac{344}{344^{1}}$.

The following orders are issued for guidance.

By order of the Chief Commissioner,

E. E. OLIVER,

Secretary to the Chief Commissioner, C. P.,

Dated 13th May 1897. *Public Works Department.*

Monthly Reports on Officers in Charge of Famine Relief Works under the control of the Public Works Department.

As the efficiency with which Famine Relief Works are managed largely depends on the intelligence, resource and industry of the Officers in Charge, it is desirable to adopt all possible means of securing a high standard of work from these officers, and to foster a spirit of emulation between them in the efficient organisation of their respective charges.

2. With this object in view, all Officers in Charge should be informed that a special monthly report regarding the work of each of them will be submitted by the Sub-Divisional Officer under whom they are serving, to the Executive Engineer. They should be told that special notice will be taken of the way in which they do their famine work, and that their subsequent advancement in the Departments to which they belong will largely depend on how that work is done.

3. Sub-Divisional Officers should submit a report on the work of each Officer in Charge under them to the Executive Engineer not later than the 15th of each month. The Executive Engineer will add any remarks he may have to make on the report, and when all the reports for a District have been received, he will consolidate them in the attached form and send it * to the Deputy Commissioner, who will add his remarks and forward it to the Commissioner for information and record in his office.

4. When an Officer in Charge reverts from employment under the Public Works Department, the reports on his work, while employed in that Department, will be sent by the Commissioner to the Head of the Department or Office to which the officer reverts.

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* Or through the Superintendent of Works in the Nagpur and Chhattisgarh Divisions.

CENTRAL PROVINCES, PUBLIC WORKS DEPARTMENT.

Secretariat.

CIRCULAR LETTER No. $\frac{354}{3491}$.

FROM

E. E. OLIVER, ESQ., M. INST. C. E.,

SECRETARY TO THE CHIEF COMMISSIONER, CENTRAL PROVINCES,

Public Works Department,

TO

THE SUPERINTENDENT OF WORKS,
ALL EXECUTIVE ENGINEERS OF DIVISIONS, AND
„ SUB-DIVISIONAL OFFICERS,

Central Provinces.

Dated Nagpur, the 14th May 1897.

Submission of Cash Account by Officers in Charge of Famine Relief Works.

SIR,

I am directed to draw your particular attention to paragraph 41 of General Order No. C-498, dated the 26th December 1896, and to say that the prompt submission, once a week, of his cash-book by the Officer in Charge of a Relief Work must in all cases be insisted on. An Officer in Charge should not usually have more than a sum sufficient for ten days' expenditure in his hands for which he has not rendered accounts.

2. This order is quite clear, but the Chief Commissioner regrets to find it has not in all cases been observed, and a case has recently been brought to his notice where, in one Sub-division, sums aggregating Rs. 1,34,274 were allowed to remain in the hands of the Officers in Charge of Relief Works unaccounted for, as much as Rs. 31,000 being in the hands of one individual, who had not submitted accounts for any portion thereof, thus causing confusion and irregularities which are now the subject of investigation.

3. Officers will be held personally responsible for any neglect of the rule as laid down in the General Order above noted.

I have the honour to be,

Sir,

Your most obedient Servant,

E. E. OLIVER,

Secretary.

Enclosures.
Nil.

CENTRAL PROVINCES, PUBLIC WORKS DEPARTMENT.

Chief Engineer's Office.

CIRCULAR LETTER No. $\frac{357}{357^2}$.

FROM

E. E. OLIVER, ESQ., M. INST. C. E.,

CHIEF ENGINEER,

Central Provinces,

TO

THE SUPERINTENDENT OF WORKS,
ALL EXECUTIVE ENGINEERS, AND
„ SUB-DIVISIONAL OFFICERS,

Central Provinces.

Nagpur, the 17th May 1897.

Average cost of work done under famine conditions by relief workers on Famine Relief Works in the Central Provinces.

SIR,

With reference to my letter No. 234—2805, dated the 20th April 1897, asking for the submission of statements showing the average quantities of work done by relief workers on the various Relief Works, and the average cost of earth-work, metal-breaking, &c., executed under famine conditions, the Chief Commissioner desires me to impress on all officers the urgent necessity for obtaining complete information as early as possible.

2. In the case of Relief Works, where more than one kind of work is being done by the relief workers, it will probably be difficult to obtain information as to the cost of each kind of work with any degree of accuracy. We have however the following data to go on:—

(*i*) The amount of work of each kind that has been done on any given Relief Work.

(*ii*) What the total cost of that work has amounted to under the following heads:—

* (*a*) wages to workers;

* (*b*) gratuitous payments in coin;

* (*c*) special establishment, medical, sanitation, water-supply, hutting, tools, &c.

(*iii*) What would have been paid for the same quantity of work if done by ordinary contract, calculated from (*i*) at normal Public Works Department rates.

* Where this has not already been made out, no time must be lost in computing expenditure under these heads.

I would then suggest that the total difference in cost between (*ii*) and (*iii*) be added proportionately to the ordinary contract rates in (*iii*), and the resultants taken as Famine Work rates.

3. This, I am aware, will not give precisely accurate figures, inasmuch as a straightforward bit of earthwork, or *gitti* breaking will cost less in proportion, by famine labour, than will hard rock-cutting or *ghât* work ; but it will probably give the best information we can hope to obtain of the cost of work as a whole.

4. The figures obtained in the manner indicated in paragraph 2 should be compared with those already called for in my letter No. 234—2805, dated the 20th April 1897, from special Charges and for each class of work, which Officers must obtain with the least possible delay.

5. Officers should also carefully note the time a Famine Work has been in operation, and any special conditions in connection with it, the extra cost in the preliminary stages inseparable from hasty and incomplete organisation owing to the necessity of providing work of some kind for large bodies of people, often collected without any notice and in quite unsuitable positions. Secondly, how the rates improve in proportion to the time the work lasts and skilled supervision is available, and there has been opportunity to teach both the workers and the petty establishment in charge of them.

I have the honour to be,

Sir,

Your most obedient Servant,

E. E. OLIVER,

Chief Engineer.

CENTRAL PROVINCES, PUBLIC WORKS DEPARTMENT.

Secretariat.

CIRCULAR LETTER No. $\frac{481}{4444}$.

FROM

E. E. OLIVER, ESQ., M. INST. C. E.,

SECRETARY TO CHIEF COMMISSIONER, CENTRAL PROVINCES,

Public Works Department,

To

THE SUPERINTENDENT OF WORKS,
ALL EXECUTIVE ENGINEERS OF DIVISIONS, AND
„ SUB-DIVISIONAL OFFICERS,

Central Provinces.

Dated Nagpur, the 1st July 1897.

Famine Relief Works—The numbering of Charges.

SIR,

I am directed to again draw your attention to the absolute necessity of maintaining for the various Charges the same numbers as originally given in Statement B. This is very important as it is often impossible to identify the Charges referred to when the numbers have been changed.

2. When two Charges are amalgamated the returns should show the combined Charge as $(x + y)$ and when a Charge is split up, the new Charges formed therefrom should be shown as $x\text{-}_a$, $x\text{-}_b$, &c.

3. If a new Charge, additional to those sanctioned in Statement B, is started, it should be given a number higher than the total number sanctioned for the District, and should be specially reported.

I have the honour to be,

Sir,

Your most obedient Servant,

E. E. OLIVER,

Secretary.

Enclosures.
Nil.

CENTRAL PROVINCES, PUBLIC WORKS DEPARTMENT.

GENERAL ORDER No. $\frac{418}{4517}$.

All Commissioners and Deputy Commissioners,
The Superintendent of Works,
All Executive Engineers, and
„ Sub-Divisional Officers, Central Provinces.

The following instructions are circulated to the Officers marginally noted for information and guidance.

By order of the Chief Commissioner,

E. E. OLIVER,

Secretary to the Chief Commissioner, C. P.,

Dated the 5th July 1897. *Public Works Department.*

Famine Relief Works—Classification of labourers.

From the weekly statements received showing the classification of relief workers it is clear that there is a great want of uniformity in the procedure observed. The general orders laid down in regard to workers to be shown under the D and B classes have not in all cases been followed, and perhaps they may not always have been understood.

2. It was intended, *vide* Rule 25 of General Order No. C.-498 of 26th December 1896, to place all workers at first in the D scale and only to remove them to the B scale as gangs were trained to do a full task. This was to apply—*vide* Rule 15 of the same General Order—to men, women and children alike.

The word "diggers" in the scale given under Rule 29 of that General Order was used in a technical sense, and was intended to include generally all men and women doing the full amount of work on which the task of the gang is measured, whether it be digging earthwork or muram, or cutting rock, or breaking stones, &c.

3. There are of course certain differences in the numbers under B and D classes shown in different districts and in different works in the same district, that may be attributed—(1) to the class of work on which the workers are employed, and (2) to the difference in their health and physique, or to their being more or less accustomed to the work they are employed on; but a still greater divergence is probably due to the personal equation of the Officer-in-charge, the way in which he has read the orders, his success or the reverse in obtaining an adequate task, or the different systems adopted in organizing gangs. Some officers appear to have classed the whole gangs under B and fined down for short work; in other instances there have been difficulties in reverting to D, workers once shown as B, but whose work has fallen off. After allowing for these, however, the intention of the rule seems to have been more or less widely departed from, and it is feared greater numbers have been shown under class B than there is any justification for. This would appear to be particularly the case in the Seoni, Chhindwara, Balaghat, Raipur and Bilaspur Districts, where it is practically certain that adequate tasks are not being obtained.

4. On Civil works the figures seem to show a still wider divergence from the classification intended.

In Chhindwara the whole of the workers—men, women and children—are shown under class B. In Bilaspur 3,288 are shown under class B as compared with 111 under class D. In Raipur the B's are as 3 to 1, in addition to 2,891 shown under class A, usually reserved for mates; and in Hoshangabad the B's are as 10 to 1.

5. The particular attention of Civil and Public Works Officers is therefore requested to the principle of classification as above described—

(1) in regard to the importance of showing in the D class all those workers who are not doing the full task;

(2) of showing in the B class all those workers—men, women and children—whether employed on earthwork, *muram*, rock-cutting or stone-breaking, who, as explained above, are doing the full amount of work on which the task of the gang is measured;

(3) of transferring from the B to the D class all gangs who repeatedly fail to perform the full task; and

(4) of showing all piece-workers under class B.

CENTRAL PROVINCES, PUBLIC WORKS DEPARTMENT.

Chief Engineer's Office.

CIRCULAR MEMORANDUM No. $\frac{645}{6212}$.

FROM

E. E. OLIVER, ESQ., M. INST. C. E.,

CHIEF ENGINEER,

Central Provinces,

TO

ALL SUB-DIVISIONAL OFFICERS,

Central Provinces.

Dated Nagpur, the 31st August 1897.

Famine Relief Progress Reports.

As the piece-work system has now been introduced in all the districts, it is essential that Weekly Progress Reports must show workers and expenditure on each task and piece-work separately on the 2nd page of the Progress Report, as per sample statement appended.

2. The Sub-Divisional Officer will also state on the top of the 1st page of the Progress Report:—

(1) The name of his Sub-Division.
(2) Do. of the Civil District.
(3) Do. of his Head-quarters.
(4) Do. of the nearest Post or Telegraph Office in case the head-quarters be a small village.

3. Instances having occurred in which several Sub-Divisional Officers have still been telegraphing the famine figures although their printed reports reached this office on the day prescribed in the C. P. Memorandum No. $\frac{303}{3006}$, dated the 28th April last, it is again requested that, in future, famine figures may be telegraphed *only after* it is found that the reports concerned cannot reach Nagpur even on the following Thursday morning.

4. It should be particularly noted that all covers containing the reports or communications connected therewith intended for this office should be addressed *in full*, as required by paragraph 1 of the memorandum referred to above.

E. E. OLIVER,

Chief Engineer.

Enclosures.
Nil.

Statement referred to in paragraph 1.

Daily average piece-workers.	Expenditure.	Daily. average task-workers.	Expenditure.	Numbers of Charges as per Statement B.	General Remarks.
	Rs.		Rs.		
					The following works have been started :—
3,670	2,005	683	444	2	Old Bombay Road, Babai Section, "Babai."
2,447	1,773	*Nil.*	*Nil.*	3	North-Western Road, Itarsi-Dhar Section, "Kesla."
9,966	4,659	382	261	9 and 11	Semri-Barkatch Road and Semri-Sohagpur Road, "Semri."
2,010	1,093	32	21	13	Old Bombay Road, Dhurumkundi Section, "Dhurumkundi."
18,093	9,530	1,097	726	...	

Total workers (task and piece-workers) ... No. 19,190
Total Expenditure ... ... Rs. 10,256

CENTRAL PROVINCES, PUBLIC WORKS DEPARTMENT.

Chief Engineer's Office.

CIRCULAR LETTER No. $\frac{747}{7108}$.

FROM

E. E. OLIVER, ESQ., M. INST. C. E.,

CHIEF ENGINEER,

Central Provinces,

TO

ALL EXECUTIVE ENGINEERS,

Central Provinces.

Dated Nagpur, the 9th October 1897.

Value of work done by Famine labour.

SIR,

I have the honour to forward a Memorandum regarding the preparation of statements showing the cost of work done by Famine labour as compared with the value of the same work at normal contract rates, and also a set of statements prepared for the Charges in the Jubbulpore and Mandla Districts up to the 29th May.

2. I request that you will at once prepare and submit similar statements for each and every Charge in your Division from commencement up to the end of August, to be followed by statements for September and October with as little delay as possible. The early submission of these statements is important, and you will be held personally responsible for their prompt submission in complete form. Serious notice will be taken of failure to comply with these orders.

I have the honour to be,

Sir,

Your most obedient Servant,

E. E. OLIVER,

Chief Engineer.

Enclosures.

1. Memorandum.
1. Sample set of Statements.

MEMORANDUM.

Value of work done by Famine labour.

READ AGAIN—

Public Works Department Circular Letter No. $\frac{357}{3572}$, dated the 17th May 1897.

Public Works Department endorsement No. $\frac{529}{5249}$, dated the 20th July 1897.

The lines on which the average cost of work done by Famine labour should be calculated were laid down in Public Works Department Circular Letter No. $\frac{357}{3572}$, dated the 17th May 1897. Statements are now required of the value of work done by Famine labour from the commencement of relief operations in December last up to the end of October 1897, by which time most of the relief-works will be closed. For such works as are not then closed, supplementary statements dealing with the work done after October, can be submitted.

2. A complete set of statements for the districts of Jubbulpore and Mandla from the commencement up to May 29th are attached, as an example of the form the statements now called for should take, and Executive Engineers are required to at once submit similar statements for each Charge from its opening up to the end of August, to be followed by statements for September and October with as little delay as possible.

3. The Executive Engineer must attach to each statement a brief explanatory note, giving the most important particulars that have affected the rates; such as the bad management on the part of Sub-Divisional Officers or Officers-in-charge, suspected peculations, outbreaks of cholera, changes of orders or of system, condition or inexperience of work-people, &c. No controversial matter is to be introduced, nor are carping remarks to be made. Details are not of so much importance as the bringing out of broad facts in a clear intelligible way.

4. In preparing the statements the following directions should be attended to:—

The quantity (i) of the work done is known or must be ascertained.

Its value (iii) at normal contract rates can then be calculated.

The actual expenditure (ii) is or should be known under the following heads:—

(*a*) Wages to workers.
(*b*) Gratuitous relief.
(*c*) Special establishment, hutting, hospital, conservancy, medical, water-supply, tools and plant, &c.

Under (*b*) should be included, besides gratuitous relief in coin, as much of gratuitous relief in food as can be separated from (*c*), as ordered in Circular Letter No. $\frac{520}{5249}$, dated the 20th July 1897.

Under (*c*) should be included all charges that do not fall under (*a*) and (*b*). It is probable that the expenditure on tools and plant has been kept by districts and not for each Charge, in which case the expenditure on this head must be distributed to each Charge in the proportion that the expenditure on all

accounts on the Charge bears to total expenditure on all accounts on all the works over which it has to be distributed. In the Jubbulpore and Mandla statements 50 per cent. only of the total cost of tools was taken, that being about the proportion chargeable for the period under review.

The amount to be now distributed should be the total cost of all tools and plant purchased for Famine work less the value at which what is over will be taken on to provincial stock at the termination of Famine-relief operations.

5. The totals of (*a*), (*b*) and (*c*) divided by the value of work done at normal rates will give the ratio of Famine rates to normal rates *including* gratuitous relief.

The totals of (*a*) and (*c*) only divided by the value of work done at normal rates will give the ratio of Famine to normal rates *excluding* gratuitous relief.

6. The Famine rates for each item of work are obtained by multiplying the ordinary contract rates by the ratios so obtained.

L. M. ST. CLAIR,

For *Chief Engineer*,

Central Provinces.

NAGPUR:

Dated the 9th October 1897.

FAMINE-RELIEF WORKS.

JUBBULPORE DISTRICT.

Statement of Work done and amount spent on Collection of Metal and Moorum for raising in class the Mirganj-Jhansighat Road. Charge No. 2, Southern Sub-Division.

Mr. P. FitzPatrick, Sub-Divisional Officer.

Description of Work.	(i) & (iii) Value of work at ordinary Contract Rates.			(ii) Amount spent from 20th April to 29th May 1897.				Ratio of Famine rates to ordinary rates.	Famine Rates.		Remarks.
	Quantity.	Rate.	Amount.	Wages. (a)	Gratuitous relief. (b)	Special establishment, water-supply, sanitation, hutting, tools, &c. (c)	Total.		Including gratuitous relief.	Excluding gratuitous relief.	
	Cft.	Rs. A. P.	Rs.	Rs.	Rs.	Rs.	Rs.		Rs. A. P.	Rs. A. P.	
Earthwork	3,247,637	3-0-0 per 1,000	9,743						10 13 9	10 2 8	
Metal breaking	37,234	3-0-0 per 100	1,117						10 13 9	10 2 8	
Collection and carriage of kanker average lead 3 miles.	164,744	3-4-0 „	5,354	47,929	3,751	9,463	61,143	3·62 including gratuitous relief. 3·39 excluding do.	11 12 3	11 0 3	
Do. of stone, 3 miles ...	12,975	4-0-0 „	519						14 7 8	13 9 4	
Service road	8 miles.	20-0-0 per mile	160						72 6 4	67 12 9	
			16,893	47,929	3,751	9,463	61,143				

CENTRAL PROVINCES, PUBLIC WORKS DEPARTMENT.

Secretariat.

CIRCULAR LETTER No. $\frac{752}{7180}$.

FROM

E. E. OLIVER, ESQ., M. INST., C. E.,

SECRETARY TO THE CHIEF COMMISSIONER,

Central Provinces,

Public Works Department,

TO

ALL COMMISSIONERS AND DEPUTY COMMISSIONERS,

Central Provinces.

Nagpur, the 13th October 1897.

Value of Work done by Famine labour.

SIR,

I am directed to forward copy of a Note drawn up for the guidance of Civil Officers in preparing statements of the value of work done by Famine labour, and to request that a statement for each relief work under the management of Civil Officers may be submitted as early as possible. The period covered should be from commencement to the end of October..

I have the honour to be,

Sir,

Your most obedient Servant,

L. M. ST. CLAIR,

For *Secretary.*

Enclosures.

1 Note.
1 Specimen form.
1 Schedule of rates.

Note for the guidance of Civil Officers in preparing Statements of the value of work done by Famine labour.

It is important that statements for all works should be prepared in the same way. A specimen form, filled in for an imaginary work, is therefore attached for guidance.

2. The details of the work done in column 1 should be as full as possible. The quantity of each item, as ascertained by actual measurement, should be entered in column 2, and the rate at which such work is usually done under normal conditions in column 3. A schedule of rates for the most common items of work is attached to this note; but it must be understood that these rates are not universally applicable. The local Public Works Department officials should be consulted regarding the usual contract rate under normal conditions. The value of each item of work is then calculated from columns 2 and 3 and entered in column 4. The total of column 4 will give the total value of the work if it had been carried out in the usual manner at normal contract rates.

3. The amount actually spent in carrying out the work by Famine labour should be separated as follows:—

The amount paid away in wages to workers should be entered in column 5.

The amount paid in coin to dependents, children and all non-workers should be entered in column 6, and this column should also contain the expenditure on kitchens where gratuitous relief in food is given, if this can be separated from the rest of the expenditure.

In column 7 should be entered all expenditure on special establishment, hutting, hospital, water-supply, conservancy and tools. In fact all expenditure which cannot strictly be classed as either wages to workers or gratuitous relief.

4. The total of columns 5, 6 and 7 is entered in column 8, and the last column will show the actual cost of the work, everything included. The totals of columns 5 and 7 only added together will give the cost of the work excluding gratuitous relief. This is to be entered in column 9.

5. To find the proportion that the cost of the work as done by Famine labour bears to its real value, both inclusive and exclusive of gratuitous relief, divide column 8 by column 4 for the proportion inclusive of all charges, and column 9 by column 4 for the proportion exclusive of gratuitous relief. These ratios are to be shown in column 10. The ordinary rates in column 4 multiplied by these ratios will give the actual rates of work as done by Famine labour, these rates being shown in columns 11 and 12.

6. In the column of remarks, No. 13, a short explanatory note should be given regarding anything that has unfavourably affected the rates at which work was done, such as bad management, outbreaks of cholera or other sickness, the poor condition of the people, high prices, &c.

L. M. ST. CLAIR,

The 7th October 1897. For *Secretary.*

FAMINE-RELIEF WORKS.

DISTRICT ... Jubbulpore. NAME OF WORK ... Constructing Bukaharábad Village Road. Length 2 miles.

TAHSIL ... Murwara. OFFICER-IN-CHARGE OF RELIEF-WORK ... Zulum Khan.

Description of Work.	Value of work at Ordinary Contract Rates.			Amount spent from 29th December 1896 to 14th October 1897.				Total exclusive of gratuitous relief.	Ratio of cost by Famine labour to cost at contract rates.	Famine Rates.		Remarks.
	Quantity.	Rate.	Amount.	Wages.	Gratuitous relief.	Special establishment, tools, &c.	Total.			Inclusive of gratuitous relief.	Exclusive of gratuitous relief.	
1	2	3	4	5	6	7	8	9	10	11	12	13
	Cft.	Rs. A. P.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.		Rs. A. P.	Rs. A. P.	
Earthwork, soft soil. Lead under 50 feet, lift under 5 feet.	179,520	3 0 0 per 1,000	539							13 8 0	12 5 4	High rate due to— (i) Not sufficient tools being available at first; hence people sat idle.
Collecting boulders ...	2,400	3 8 0 per 100	84							15 12 0	14 6 2	(ii) Outbreak of cholera in July; many people fled and returned after a fortnight.
Digging moorum ...	24,000	0 8 0 per 100	120	3,263	370	656	4,289	3,919	4·50 including gratuitous relief. 4·11 excluding gratuitous relief.	2 4 0	2 0 10	(iii) Condition of workers very poor.
Carrying moorum, ½ mile ...	24,000	Do.	120							2 4 0	2 0 10	(iv) Price of grain averaged 6½ seers; hence high wages had to be paid.
Consolidating moorum ...	18,000	Do.	90							2 4 0	2 0 10	&c. &c. &c.
			953	3,263	370	656	4,289	3,919				

Schedule of Average Rates (Normal Contract Rates).

Description of Work.	Rate.	Remarks.
	Rs. A. P.	
Earthwork—In soft soil	3 0 0 per 1,000 cft.	With lead not exceeding 50 ft. and lift 5 ft. For every additional 100 ft. of lead or 5 ft. of lift add 10 annas per 1,000 cft. to the rate.
„ Soft moorum	5 0 0 do.	
„ Hard moorum	7 8 0 do.	
„ very hard moorum with boulders ...	10 0 0 do.	
Digging and stacking moorum at quarry	0 8 0 per 100 cft.	
Metal or moorum carriage and stacking at roadside, ¼ mile...	0 6 0 do.	
„ „ „ „ ½ „ ...	0 10 0 do.	
„ „ „ „ ¾ „ ...	0 14 0 do.	
„ „ „ „ 1 „ ...	1 2 0 do.	
Breaking metal	2 4 0 to 3 8 0 per 100 cft.	According to hardness of stone.
Kanker and bajri collection at site, where found ...	0 8 0 per 100 cft.	

Note.—Rates vary in different districts, and the local Public Works Department officials should be consulted egarding the normal contract rate for any particular class of work.

GENERAL ORDER No. $\frac{355}{3571}$ A.

The following instructions, relating to the introduction of the piece-work system on famine relief works carried out under the Public Works Department, are issued for information and guidance.

The officers of the Public Works Department are requested to take as prompt action as possible to carry out these instructions, and are hereby directed to report to the Administration the extent to which the system has been, or is being, adopted in their respective Charges.

By order of the Chief Commissioner,

E. E. OLIVER,

Secretary to the Chief Commissioner, C. P.,

Dated 15th May 1897. *Public Works Department.*

Famine Relief Works.

READ AGAIN—

Government of India letter in the Revenue Department No. $\frac{16}{104-1}$ F., dated the 13th February 1897, forwarded to Commissioners and Deputy Commissioners with Central Provinces, Revenue Department, No. 1301—1322, dated the 27th February 1897, and to Public Works Officers with Public Works No. $\frac{330}{3255}$, dated the 6th May 1897.

Central Provinces, Revenue Department, Circular Letter No. 1685, dated the 22nd March 1897, to all Commissioners, and forwarded to Public Works Officers with Public Works Nos. 2676—78, dated the 14th April 1897.

These letters and notes in connection with suggestions for the introduction of a system of piece-work on famine relief works in these Provinces have now been some time before the officers concerned.

In the Government of India's letter No. $\frac{16}{104-1}$ F of 13th February, dealing with "*The principles for regulating expenditure on Public Works in time of Famine*," a large discretion was left to Local Governments and Administrations in the matter of payment-by-results upon relief works, whenever the conditions seem to justify such a system.

In Revenue Department Circular Letter No. 1685 of the 22nd March, circulating correspondence with the Government of India regarding a Note by the Chief Engineer on the use of piece-work for relief works in the Central Provinces, the Chief Commissioner invited Commissioners and Deputy Commissioners to consider how far the system could be adopted in the distressed districts, and directed its introduction in certain others not acutely distressed.

It may be noted that a similar system is being widely adopted in the North-Western Provinces, and in a recent resolution the Lieutenant-Governor has sanctioned the introduction of another like system in several Civil Divisions and local areas of Bengal.

2. There are several reasons which lead the Chief Commissioner to think that, even in districts classed as distressed, the system might be largely adopted with advantage. There can be no doubt, and it is a very satisfactory feature of the relief operations, that the general condition of the relief workers has greatly improved. Even where not actually robust, a very large proportion are fully capable of doing a full task, and, in the interests both of the Government and of the people themselves, a full task ought to be exacted.

Owing to the paucity of good supervising agency it seems equally certain that, in the majority of cases, nothing like an adequate task has been obtained on works conducted on the task-work principle. More especially is this the case upon over-crowded works,

where proper organization can scarcely be possible. In paragraph 4, section II, of the rules in G. O. No. C-498 of the 26th December 1896, it was laid down that when the numbers on a work exceeded 5,000, an additional work was to be started, and any in excess of 6,000 were to be promptly drafted off. In practice it has occurred that numbers often flocked to the work far more rapidly than it was found possible to arrange suitable fresh employment for them or establishment to effectively supervise them. The natural results of failure to insist on any adequate task is for the crowd to grow with almost arithmetical progression, until it is apt to degenerate into a mob of persons doing a minimum of work. The numbers returned on such works cannot therefore be always accepted as a safe measure of the amount of distress prevailing in a district.

It must further be remembered that there are always a considerable number of people ready to come on to work opened near their own homes, and to supplement their ordinary earnings at a slack season of the year by a temporary spell of fairly easy work on road making, muram collection or stone breaking. Where the supervision is inadequate and the task easy, the numbers of this class are enormously increased.

Upon ordinary relief works on the task-work principle, not only is effective supervision difficult to obtain, but it is enormously costly in proportion to the amount paid to the workers, while the opportunities for irregularities are unfortunately great. Now that the relief works have extended over so many districts, these difficulties have been greatly increased and suitable work agents have become practically unprocurable. On the other hand, in the case of piece-work, much less detailed supervision is involved and the payment being by results, there is but little opening for the misappropriation of funds.

It is also necessary to consider how relief works, as they cease to be absolutely necessary, can be best contracted. In some five or six weeks the monsoon rains are due, when it is hoped that large numbers of the workers will of their own accord return to their villages and their ordinary avocations. But in any case it will be more than ever necessary to make sure, by an effective test, that those remaining are *bonâ fide* people for whom relief work is a necessity. This can be most readily ascertained by a strict test under the piece-work system, the rates being lowered to a mere subsistence wage.

3. In accordance with the recommendations of the Commissioners, and under the orders of the Chief Commissioner, work under the piece-work system is being introduced in certain districts of all four Civil Divisions, and proposals for certain others are under discussion. It may therefore be useful to point out that the introduction can only be done gradually; anything like a sudden or sweeping change of system is to be deprecated.

It would be preferable to begin by the conversion of one complete Charge rather than the partial conversion of two or three. Paragraph 5 of the principles laid down in the Government of India letter No. $\frac{16}{104-1}$ F of 13th February, above referred to, should be read in this connection. The earnings of an able-bodied labourer on piece-work should enable him to support his own dependants. To increase his earnings and at the same time employ an expensive establishment alongside to provide all his dependants with a liberal subsistence wage would certainly not tend to economy.

Should it be found necessary to provide for infirm gangs, or dependants with no workers to look to, it will generally be possible to draft these to some other Charge maintained on the ordinary task-work system: as for instance on the old Bombay Road, where it has been suggested that for the present every other Charge only should be on the piece-work system.

On the Charges retained on the old system a full task must be insisted on, and anything like over-crowding absolutely prevented. The Chief Commissioner expects that the local Civil authorities will judiciously exercise the needful presure to equalise, as far as possible, the numbers on the different Charges open, and to check wholesale desertion of a piece-work Charge in the hopes of obtaining elsewhere a daily dole for a merely nominal task.

4. In the conditions attached to the Chief Engineer's Note of the 22nd January 1897, it was suggested that the piece-work rates might be fixed at a certain percentage over the ordinary Public Works rates; but it must be borne in mind that the latter must necessarily vary with the price of grain, which is now, in most districts, much dearer than at ordinary times. Executive Engineers should carefully consider this, as well as take care that the rates given do not vary in any anomalous way in neighbouring districts, and are not such as to attract labour for which there exists employment elsewhere.

5. The detailed arrangements to be followed must necessarily vary under different circumstances. In some cases it may be possible to follow the plan adopted for metal breaking at Nagpur and proposed by the Commissioner for the *ghat* section of the Baihir-Balaghat Road, and select a suitable substantial and reliable Public Works contractor who would undertake the position of work agent, arrange for gangers and provide the necessary daily payments, the total work done being measured up and payments made to him weekly or fortnightly. In such a case, no contract must be entered into for a specific

amount or time, the work being paid for strictly under a schedule of rates agreed upon and terminable at any time without notice.

In others it may be found convenient to employ famine relief labour gangs upon ordinary maintenance or repairs of roads, or, in the rains, on the consolidation of road metal, in the place of ordinary repair and maintenance gangs.

Again, in the Charges still retained for famine relief by ordinary task-work, it will often be feasible to gradually substitute piece-work for the task, as is practically done at present in some cases for metal collection and breaking.

6. The Chief Commissioner is desirous of leaving to local officers considerable discretion as to the detailed arrangements to be followed in each case, or minor modifications of the Chief Engineer's original draft conditions; but Executive Engineers and Sub-Divisional Officers must, in communication with Commissioners and Deputy Commissioners, lose no time in taking the necessary action in all Charges for which the piece-work system is considered suitable.

CENTRAL PROVINCES, PUBLIC WORKS DEPARTMENT.

Secretariat.

CIRCULAR LETTER No. $\frac{385}{3822}$.

FROM

E. E. OLIVER, ESQ., M. INST. C. E.,

SECRETARY TO THE CHIEF COMMISSIONER,

Central Provinces,

Public Works Department,

TO

ALL COMMISSIONERS AND DEPUTY COMMISSIONERS,
THE SUPERINTENDENT OF WORKS, AND
ALL EXECUTIVE ENGINEERS AND SUB-DIVISIONAL OFFICERS,

Central Provinces.

Dated Nagpur, the 28th May 1897.

Famine Relief Works—Piece-work.

SIR,

With reference to General Order No. 355—3571-A, of the 15th May 1897, relating to the more general introduction of piece-work on Famine Relief Works, and more particularly with reference to paragraph 3, the Chief Commissioner desires me to say it will be observed that the piece-work system does not admit of the existence of *dependants* paid daily wages side by side with the piece-workers. It does, however, admit of the existence of *infirm gangs*, paid at task-work rates (and if necessary of dependants upon persons employed in such task-work gangs) where this is found requisite in any district where there is not, within reasonable distance, a work on the task-work system to which such inefficient labour could suitably be drafted. In such districts as Seoni and Mandla, where the Public Works Department works are widely separated, and where no such drafting is probably feasible, it is necessary to have an "infirm gang" on the task-work side by side with the men in work on piece-work, and the problem of the division of the workers between the two is one that will have to be very carefully considered.

It seems to the Chief Commissioner that in any work where inefficient labour (that is, labour not able to make a sufficient living by piece-work) exists to a larger extent than 25 per cent., it will probably not be worth while to attempt to re-organise the work on the piece-work system, except as an optional alternative to the task-work. If the proportion does not exceed 25 per cent., the first separation from the mass of workers who are to be provided for by piece-work of the infirms who are to continue on task-work should, in Mr. Lyall's opinion, be made by the Sub-Divisional Officer (or Executive Engineer if he can attend)

acting in conjunction with the Circle Relief Officer, to be deputed by the Deputy Commissioner and with the advice of the Medical Officer in charge. In a district like Jubbulpore, where there is a special Commissioned Medical Officer in charge of famine works, he should, if possible, be called in. These officers should then separate off the " infirms " from the robust who are to be left to the piece-work ; and the Hospital Assistant in charge will on the experience he thus gains have to determine whether any future applicant for work should be employed in the piece-work or in the task-work (infirm) gang. Mr. Lyall attaches much importance to this first distribution of labour between the two systems, and trusts that it will be carefully carried out.

It is a cardinal principle of the piece-work system that it shall not be introduced where the proportion of weak inefficient labour is large, and also that in introducing it, adequate provision is made for the employment of the balance, whatever it is, of the inefficient labour either on a neighbouring work or an infirm gang employed on the same work in task-work. In works consisting mainly of stone-breaking and muram collection there should be no difficulty in marking off a length on each work for task-work to be done by the " infirm gang " on D class wages.

I have the honour to be,

Sir,

Your most obedient Servant,

E. E. OLIVER,

Secretary.

CENTRAL PROVINCES, PUBLIC WORKS DEPARTMENT.

Secretariat.

CIRCULAR LETTER No. $\frac{579}{3701}$.

FROM

E. E. OLIVER, ESQ., M. INST. C. E.,

SECRETARY TO THE CHIEF COMMISSIONER,

Public Works Department,

TO

ALL COMMISSIONERS AND DEPUTY COMMISSIONERS,
„ EXECUTIVE ENGINEERS AND SUB-DIVISIONAL OFFICERS,

Central Provinces.

Dated Nagpur, the 7th August 1897.

SIR,

I am directed to enclose a copy of a Memorandum, dated the 3rd instant, by the Chief Commissioner, on the introduction of piece-work or payment-by-results on all famine-relief works managed by the Public Works Department, and to request your careful attention to the instructions contained in it.

Except as directed in paragraph 6 of the Memorandum, these orders supersede all orders inconsistent with them now in operation in regard to the employment of relief-workers on piece-work. Executive Engineers and Sub-Divisional Officers must, as directed in paragraph 8, take pains to assure themselves that they are fully understood by all Officers-in-charge and Hospital Assistants employed on relief-works.

I have the honour to be,

Sir,

Your most obedient Servant,

E. E. OLIVER,

Secretary.

No. $\frac{579}{5701\text{-A}}$.

Dated Nagpur, the 7th August 1897.

Copy forwarded to the Chief Secretary to the Chief Commissioner, Revenue Department, for information.

E. E. OLIVER,

Secretary.

MEMORANDUM.

I have lately been considering, in conference with the four Commissioners and the local officers of distressed districts, the question of the employment of piece-work on relief-works managed by the Public Works Department.

Various orders have been given on this subject (Revenue Department Circular to Commissioners, No. 1685, dated the 22nd March 1897, and enclosures; Public Works Department General Order No. 355—3571-A, dated the 15th May; Public Works Department Circular No. 385—3822, dated the 28th May), and the introduction of the system of piece-work was generally enjoined in the instructions issued, in accordance with the conclusions of the Pachmarhi Conference of the 25th May, when the rains were believed to be close at hand and it was of the highest importance to induce able-bodied agriculturists and agricultural labourers to leave the relief-works and resume their ordinary work in the fields. The break in the rains which set in towards the end of June, and continued till about the 10th July, caused a stoppage of field-work and created general apprehension, resulting in a sharp rise of prices. This led to a large return to relief-works of persons who had left them for their villages, and necessitated the withdrawal, on the 3rd July, of the orders which had been issued with a view to restrict the admission of able-bodied persons to such works. Since then, however, the rains have re-commenced, the kharif area has been fully sown, and the crops, if the rain continues in a normal manner, promise well. Prices, however, have not yet fallen in any marked degree, and probably will not do so until the continuance of rain into September assures the safety of the kharif and gives good promise, by enabling a large area to be sown, of the rabi harvest.

2. The instructions as regards piece-work are generally to the following effect:—

(*a*) It is to be introduced as largely as possible wherever a considerable proportion of the workers are in good condition, not more than 25 per cent. being inefficient.

(*b*) Where it is introduced, ample provision is to be made for the inefficient labour by attaching to each piece-work, or by providing in an adjacent work at no great distance, task-work for those unable to earn a living by piece-work.

(*c*) The separation of labourers into those able to live by piece-work and those not so able is to be conducted carefully by the Medical Officer and the Officer-in-charge.

(*d*) Piece-workers are to be generally employed under contractors or gangers, who are to receive for themselves a fixed proportion of the contract rate for work done, from which they are to meet certain charges for establishment, tools, &c. It was originally anticipated that by this means it would be possible to effect a considerable relief to the Public Works Department in the provision of what that Department has found it most difficult to provide,—the subordinate establishment for looking after relief-works. Of the contract rate, the remainder was to go to the labourers, the principle being that a fixed rate was to be given for work done, no more being paid than the work done justified.

(*e*) Dependants of piece-workers were not to be separately paid or fed, it being understood that the piece-work wage was fixed at a sum sufficient to enable a worker to support his dependants.

3. These being the general features of the scheme, it has to be seen how far they should be modified with reference to the conditions of the works as they stand at present and the need of the distressed population for relief.

As the situation now stands, it may be said generally that agriculturists have for the most part gone back to their fields, but in some cases they have left their women and children (generally in good condition) on the works. A considerable number of agricultural labourers have also returned to their villages, but the number who find employment there is less than in normal years, owing to the tenants doing as much as possible of the field-work by themselves or their families. The residuum on the works consists partly of the families of persons employed in the villages, to a certain extent of able-bodied labourers who would in ordinary times find employment in the fields, and to a very large extent of inefficient and more or less emaciated people who are in want mainly of food, are unable to do a full task, and cannot find employment or support elsewhere than on the works. Of such people probably a considerable number, who had originally on the first fall of rain left the works, have now returned to them; and it is mainly to meet their case that we must make provision during the two-and-a-half or three months that remain until the kharif harvest is reaped.

4. This being the situation, let us see how far the principles hitherto laid down, and set forth above, are applicable to it.

In the first place, the departure of the able-bodied has left on the works a considerably larger proportion of the inefficient than was contemplated when the system was first introduced. It may therefore be that the limit of 25 per cent. of inefficients hitherto laid down would exclude from piece-work a larger proportion of our works than is necessary.

In the second place, with reference to condition (*b*), it should be understood that *every work* must now have a task-work portion, and that the distance test (originally devised for the purpose of keeping off task-work, the dependants of able-bodied piece-workers) is to be abandoned. As will be seen below, the principle now to be enforced is that able-bodied labour is not to be paid except by results, while inefficient labour must be paid enough to enable it to live. To maintain anywhere (except under very special circumstances) task-works admitting the able-bodied would defeat this principle.

In the third place, with reference to condition (*c*), the separation of the able-bodied piece-workers should be carried out in such a manner that only those *distinctly robust and strong*, should be relegated to that form of labour, the benefit of a doubt being in all cases given to the applicant who applies for admission to task-work.

Fourthly, inasmuch as the careful separation of the able-bodied for piece-work requires a Hospital Assistant to be entertained, and the supervision of the task-workers who will, it may be presumed, form the majority, together with the duty of seeing that work is properly measured up and that piece-workers receive their due proportion of the contract price, necessitates the presence of an Officer-in-charge, it is apparent that the large saving in establishment which was hoped for by the intervention of contractors will not be secured. In the

great majority of works, therefore, it would seem unnecessary to have contractors, large or petty, at all, and the piece-work system should be carried out under the direct supervision of the Officer-in-charge.

In this way of applying the system, the persons selected for piece-work should be formed into gangs, and instead of being paid by the day (as task-workers should be), will be paid strictly according to the work turned out: twice a week for payment should be sufficient.

Fifthly, condition (*e*) can no longer be observed with safety. Experience has shown that piece-workers cannot be trusted to support their families, especially their children; and it is not necessary or desirable to encourage able-bodied persons to stay upon the works by giving them more than a bare subsistence wage for themselves. Their dependants will be dealt with in the same manner as the dependants of task-workers.

5. These being the principles which should now be enforced, the following are laid down, in substitution for those set forth in paragraph 2, as the conditions on which piece-work is to be carried out henceforward :—

(*a*) It is to be introduced on *every* work without exception (subject to the reservations mentioned below), unless the Commissioner, for reasons to be stated in writing, considers it unsafe in any particular locality to resort to it.

(*b*) Every work will, as hitherto, have an Officer-in-charge and a Hospital Assistant. The intervention of a contractor to take charge of the piece-work gangs is not considered necessary or desirable.

(*c*) It will be the duty of the Hospital Assistant and the Officer-in-charge working together to decide in the case of every labourer whether he or she is or is not fit for piece-work. To prevent constant changes in the constitution of the piece-work gangs, it will be convenient that all persons should be enrolled in the task-work gangs on first admission. But it will be the duty of the Officer-in-charge, working with the Hospital Assistant, to examine the task-work gangs at least twice a week and to draft from them on to piece-work all those who are in good condition and able-bodied. All doubtful cases should be left on task-work, and *no applicant whatever will be refused labour* unless, being strong and able-bodied, he refuses to work on piece-work. It will be the duty of the Deputy Commissioner, himself and by his subordinates, to satisfy himself that this classification is properly carried out.

(*d*) The piece-workers will be formed into gangs, who will, where this is found practicable, be called upon to elect their own mates or gangers. A suitable number of persons will form a gang, to which a task will be allotted which is easily capable of performance, with ordinary diligence, within three days. The task will be measured and allotted by the work agent, and the work done will be measured up by him at the end of the third day, the gang receiving payment for the work done.

(*e*) The wages paid must not exceed the D or lowest class wage. If the piece-workers do not perform their full task, they will not get full wages; but if they exceed the task, they will get no more. It is not our object to give any one, certainly not any able-bodied person, more than a bare subsistence. The contract price for the task should therefore be so calculated that, if every one of the gang does a full day's work, he will receive the minimum wage and no more. *He must not be allowed to earn more by doing more work.*

(*f*) The price of the three days' work done will, if this can be arranged, be paid to the mate or ganger elected by the workers, who will distribute to each worker his share. In some works where this system has been enforced, it has been found sufficient to pay the mate one-fourth more than the rate paid to other workers; but if the Executive Engineer finds this rate insufficient, he is authorised to fix a reasonable wage for a mate who will exercise good supervision over the workers. Where it is not found practicable to induce the workers to agree to receiving payment through the mate, they must be paid separately under the eye of the Officer-in-charge.

(*g*) For all other workers there will be the ordinary task-work, on which no person classed as fit for piece-work must be allowed (except temporarily pending selection for piece-work—*vide* condition [*c*]) to earn relief.

(*h*) Dependants of piece-workers will be treated like dependants of task-workers: if children and emaciated, they will be fed at the kitchen; if adults or not emaciated children, they will receive the wage fixed for dependants, unless (as is preferable) relief at the kitchen can be given to these also.

6. I have ascertained that these rules can at once, without objection, be introduced in the districts of the Jubbulpore Division, and they should be introduced accordingly. In the Nerbudda Division there are cases in which arrangements have already been made with contractors which, if they are found to be working well, it may be inexpedient to disturb. But no new arrangements of the kind should be made, and in all works where piece-work has not yet been introduced measures should be taken to introduce it upon the system here set forth, except in the cases referred to in paragraph 5, clause (*a*) above.

Cases in which the agency of contractors may with advantage be retained are those where some degree of skilled supervision is necessary, as in the *ghat* roads of Narsinghpur, Chhindwara and Balaghat. I do not wish the arrangements made here to be disturbed.

In the Chhattisgarh and Nagpur Divisions, where Mr. Penny as Superintendent of Works has already issued detailed orders for piece-work Charges, it is not necessary to make any change in works already organized under those orders; but in any works not yet converted to piece-work, I wish the principles herein set forth (and especially the principle that persons selected as able-bodied for piece-work, shall not earn more than the D wage) to be applied. It must never be forgotten that our duty, especially at the present juncture, is not to give

the people more than is sufficient for their subsistence : it is in no wise our duty to pay them such a wage as will enable them to save money, or as will induce them to abandon or abstain from seeking other work to which they are accustomed. For this reason the tendency of the conditions hitherto in force to stimulate activity by a promise of larger payment for more work done must be abandoned, while we adequately protect the weak and infirm by securing to them a minimum wage.

7. It is probable that the number of work agents or gang muharrirs may be found somewhat insufficient to enable work to be properly measured up every three days where the payment-by-results system is largely in force. In such cases the Chief Engineer will, on application from Executive Engineers, sanction the entertainment of assistant muharrirs qualified to measure up work to assist the work agents.

8. I rely upon Deputy Commissioners and Executive Engineers and their subordinates, to take special pains to see that these instructions, which I have made as clear and intelligible as I could, are thoroughly understood and carried out. Frequent and careful inspection is specially necessary to see that no departure from them creeps in.

C. J. LYALL,

The 3rd August 1897. *Chief Commissioner.*

CENTRAL PROVINCES, PUBLIC WORKS DEPARTMENT.

Secretariat.

CIRCULAR LETTER No. C-645.

FROM

E. E. OLIVER, ESQ., M. INST. C. E.,

SECRETARY TO THE CHIEF COMMISSIONER,

Central Provinces,

Public Works Department,

TO

ALL COMMISSIONERS AND DEPUTY COMMISSIONERS,
THE SUPERINTENDENT OF WORKS,
ALL EXECUTIVE ENGINEERS, AND
„ SUB-DIVISIONAL OFFICERS,

Central Provinces.

Dated Pachmarhi, the 17th September 1897.

SIR,

I am directed to order the following modifications of the rules regarding payment-by-results contained in the Chief Commissioner's Memorandum circulated with Public Works Department Circular No. 579—5701, dated the 7th August 1897:—

I.—The new rules are not to be brought into force on any work without the consent of the Commissioner. This modifies paragraph 5 (*a*) of the Memorandum.

II.—The classification of workers referred to in paragraph 5 (*c*) is to be carried out only under the eye of a Sub-Divisional Officer, Famine Relief Officer or other Superior Officer (Deputy Commissioner and his Assistants, or Executive Engineer), and not to be left to the Hospital Assistant and Officer-in-charge working independently. This modifies paragraph 5 (*c*).

2. Where the rules have already been introduced it is necessary that, wherever this has not already been done, a Superior Officer should visit, without delay, every work where the rules are in force, and see that they are properly understood and the classification correctly made.

I have the honour to be,

Sir,

Your most obedient Servant,

E. E. OLIVER,

Secretary.

APPENDIX VI.

FAMINE RELIEF OPERATIONS UNDER THE CIVIL DEPARTMENT FROM OCTOBER 1896 TO DECEMBER 1897.

MAP
of the
CENTRAL PROVINCES
SHOWING
FAMINE RELIEF OPERATIONS
BY THE CIVIL DEPT.
Scale 1 Inch = 32 Miles
Miles.
REFFRENCES.
Central Provinces Boundary
District do.
Completed Railways
Projected do.
Roads under P.W.D.
Class I Roads
" II "
" III "
References to work done by Famine Labour
Roads
Tanks
CENTRAL INDIA AGENCY
N.W. PROVINCES
BENGAL
BERAR
NIZAM'S DOMINIONS
MADRAS PRESIDENCY
BOMBAY
76°
78°
80°
82°
84°
24°
22°
20°
18°

CENTRAL PROVINCES.

Relief Operations under the Civil Department from October 1896 to December 1897.

Relief Charges under the Civil Department.

1. Famine relief operations were started by the Civil authorities towards the end of 1896 and closed in December 1897. There were altogether 165 Relief Charges, which were opened as follows :—

Civil Division.	District.	October 1896.	November "	December "	January 1897.	February "	March "	April "	May "	June "	July "	August "	September "	Total.
JUBBULPORE ...	Jubbulpore ...	...	...	...	6	2	1	3	7	1	2	1	1	24
	Mandla ...	...	1	19	2	1	5	5	...	7	3	1	1	45
	Seoni ...	...	...	33	...	...	...	...	...	...	...	...	...	33
	Saugor ...	...	...	2	1	...	1	2	1	...	...	...	...	7
	Damoh ...	...	...	2	5	...	...	...	...	...	...	...	...	7
NAGPUR ...	Balaghat ...	...	1	...	...	1	...	1	...	...	...	...	...	3
NERBUDDA ...	Hoshangabad ...	...	...	...	...	...	1	...	...	...	...	...	...	1
	Nimar ...	1	...	...	...	...	...	...	...	...	...	...	...	1
	Betul ...	...	2	...	...	...	...	...	...	...	...	...	...	2
	Chhindwara ...	...	...	...	1	1	...	...	...	...	...	...	...	2
CHHATTISGARH.	Raipur ...	...	...	...	2	8	5	4	5	...	2	1	...	27
	Bilaspur ...	...	...	...	...	4	1	4	4	...	...	...	...	13
	Total ...	1	4	56	17	17	14	19	17	8	7	3	2	165

It will be seen from the above table that the larger numbers were in the Civil Divisions of Jubbulpore and Chhattisgarh. Excepting three in Balaghat, there were none in the Civil Division of Nagpur; and in the Nerbudda Division there were only six.

Brief particulars of relief operations.

2. Labour was principally employed on the construction of new and improvement of old village tanks, the digging of wells, and other miscellaneous works so selected as to be in the vicinity of, and of permanent benefit to, the villages most affected. Of the 165 works undertaken, 101 were village tanks; 27 village wells and other miscellaneous works; and 37 roads.

The average number employed daily on each Charge was approximately 350. The total number of day-units relieved from the commencement to the close of operations was nearly 8½ millions, and the total expenditure, including all charges, nearly 8 lakhs of rupees.

It is not easy to give precise particulars of the operations: in some cases measurements of work done have not been given; and in others, where they have been given, there appear to be doubts as to their accuracy.

But the broad facts may be stated as follows:—

Daily attendance: total	... ...	55·8 thousands.
„ „ per Charge	... ...	0·34 „
Total number of day-units relieved	...	8·36 millions.
Total expenditure	... ...	7·85 lakhs of rupees.
Number relieved per rupee	... ...	11
Expenditure per day-unit including all charges	...	18 pies.
Do. excluding miscellaneous charges but including wages and gratuitous relief	...	17 „

The work done was as follows:—

Name of District.	Number of village tanks constructed.	Number of wells and other miscellaneous works carried out.	Number of roads undertaken.
Jubbulpore	14	...	10
Mandla	25	1	18
Seoni	11	19	3
Saugor	6	...	1
Damoh	7	...	...
Baiaghat	1	2	1
Hoshangabad	1	...	...
Nimar	1	...	...
Betul	...	...	2
Chhindwara	1	...	1
Raipur	24	2	1
Bilaspur	10	3	...
Total ..	101	27	37
GRAND TOTAL ...	165		

3. The details of work done in each district are printed as Appendix A. An abstract statement of the value of work done, as arranged by Civil Divisions and Districts, is given below:—

Value of work done by ne labour.

	Name of District.	Value of work done at normal P. W. D. rates.	Total Expenditure		Total number of day-units relieved.	Ratio of Famine to Ordinary rates.		Number of day-units relieved per rupee.	Average duration of works.	Remarks.
			Including gratuitous relief.	Excluding gratuitous relief.		Including gratuitous relief.	Excluding gratuitous relief.			
		Rs.	Rs.	Rs.	No.			No.	Months	
Jubbulpore.	Jubbulpore ...	81,387	2,30,457	2,19,964	2,866,051	2·8	2·7	12	2½	The figures for Jubbulpore appear to be more carefully prepared than most, but as the ratio of famine to ordinary rates is 2·8 and number of people relieved per rupee is 12, there would seem to be a possible error in the measurements.
	Mandla ...	42,359	1,30,717	1,19,445	1,697,514	3·1	2·8	13	5	The ratio of famine to ordinary rates on the Manikpur Tank was 11½ to 1; Khaloni Ghat 12·8 to 1; and Racho Road 13 to 1; but owing to a large quantity of work having been done near Mandla at comparatively low rates (ratio 2 to 1 nearly) under the Local Board, the average ratio for the whole district works out to 3·1 to 1.
	Seoni ...	19,820	28,164	25,872	397,304	1·5	1·3	14	9½	Nearly half the work was carried out under village *Mukaddams*, who did it at practically normal rates. The average rate under the Relief Committee works out to 2·6 times the ordinary rates.
	Saugor ...	50,073	1,22,150	1,18,801	1,284,815	2·4	2·4	11	5½	Measurements seem to be unreliable.
	Damoh ...	74,573	1,52,055	1,33,651	1,970,531	2·0	1·8	13	5½	Do. do.
	Totals and Averages for Jubbulpore Civil Division.	2,68,212	6,63,543	6,17,733	8,216,215	2·5	2·3	13	6	
Nagpur.	Balaghat ...	2,638	3,556	3,556	54,355	1·4	1·4	16	2	Of the three works, one was construction of wells at contract rates, and one was under Mr. Lampard, the Missionary. For the third work quantities of earthwork done are not available.
	Totals and Averages for Nagpur Civil Division.	2,638	3,556	3,556	54,355	1·4	1·4	16	2	
Nerbudda.	Hoshangabad ...	6,954	10,970	10,137	105,511	1·6	1·5	10	4	
	Nimar ...	1,239	1,490	1,490	16,785	1·2	1·2	11	15	
	Betul ...	2,389	3,836	3,836	37,868	1·6	1·6	10	1¼	
	Chhindwara ...	16,031	19,776	19,170	213,780	1·3	1·2	11	5	
	Totals and Averages for Nerbudda Civil Division.	26,613	36,072	34,633	373,944	1·4	1·3	11	6	
Chhattisgarh.	Raipur ...	38,453	60,573	55,930	567,000	1·6	1·6	9	3½	Measurements seem to be unreliable.
	Bilaspur ...	22,314	20,411	20,384	311,143	0·9	0·9	15	4	Do. do.
	Totals and Averages for Chhattisgarh Civil Division.	60,767	80,984	76,314	878,143	1·3	1·2	11	4	
	Totals and Averages for Central Provinces.	3,58,230	7,84,155	7,32,236	9,522,657	2·2	2·0	12	5	

3. The details of work done in each district are printed as Appendix A. An abstract statement of the value of work done, as arranged by Civil Divisions and Districts, is given below :—

Value of work done by famine labour.

Civil Division.	Name of District.	Value of work done at normal P. W. D. rates.	Total Expenditure		Total number of day-units relieved.	Ratio of Famine to Ordinary rates.		Number of day-units relieved per rupee.	Average duration of works.	Remarks.
			Including gratuitous relief.	Excluding gratuitous relief.		Including gratuitous relief.	Excluding gratuitous relief.			
		Rs.	Rs.	Rs.	No.			No.	Months.	
Jubbulpore	Jubbulpore ...	81,387	2,30,457	2,19,964	2,866,051	2·8	2·7	12	2½	The figures for Jubbulpore appear to be more carefully prepared than most, but as the ratio of famine to ordinary rates is 2·8 and number of people relieved per rupee is 12, there would seem to be a possible error in the measurements.
	Mandla ...	42,359	1,30,717	1,19,445	1,697,514	3·1	2·8	13	5	The ratio of famine to ordinary rates on the Manikpur Tank was 11½ to 1; Khaloni Ghat 12·8 to 1; and Racho Road 13 to 1; but owing to a large quantity of work having been done near Mandla at comparatively low rates (ratio 2 to 1 nearly) under the Local Board, the average ratio for the whole district works out to 3·1 to 1.
	Seoni ...	19,820	28,164	25,872	397,304	1·5	1·3	14	9½	Nearly half the work was carried out under village *Mukaddams*, who did it at practically normal rates. The average rate under the Relief Committee works out to 2·6 times the ordinary rates.
	Saugor ...	50,073	1,22,150	1,18,801	183,545	2·4	2·4	2	5½	Measurements seem to be unreliable.
	Damoh ...	74,573	1,52,055	1,33,651	1,970,531	2·0	1·8	13	5½	Do. do.
	Totals and Averages for Jubbulpore Civil Division.	2,68,212	6,63,543	6,17,733	7,114.945	2·5	2·3	11	6	
Nagpur.	Balaghat ...	2,638	3,556	3,556	7,765	1·4	1·4	2	2	Of the three works, one was construction of wells at contract rates, and one was under Mr. Lampard, the Missionary. For the third work quantities of earthwork done are not available.
	Totals and Averages for Nagpur Civil Division.	2,638	3,556	3,556	7,765	1·4	1·4	2	2	
Nerbudda.	Hoshangabad ...	6 954	10,970	10,137	105 511	1·6	1·5	10	4	
	Nimar ...	1,239	1.490	1,490	16,785	1·2	1·2	11	15	
	Betul ...	2,389	3 836	3,836	37,868	1·6	1·6	10	1¼	
	Chhindwara ...	16,031	19,776	19,170	213,780	1·3	1·2	11	5	
	Totals and Averages for Nerbudda Civil Division.	26,613	36,072	34,633	373,944	1·4	1·3	11	6	
Chhattisgarh.	Raipur ...	38.453	60.573	55,930	567.000	1·6	1·6	9	3½	Measurements seem to be unreliable.
	Bilaspur ...	22.314	20,411	20,384	311,143	0·9	0·9	15	4	Do. do.
	Totals and Averages for Chhattisgarh Civil Division.	60,767	80,984	76,314	878,143	1·3	1·2	11	4	
	Totals and Averages for Central Provinces.	3,58,230	7,84,155	7,32,236	8,374,797	2·2	2·0	11	5	

APPENDIX A.

Detailed Statement of Famine Relief Works under Civil Officers in the Central Provinces, October 1896 to December 1897.

District.	Name of Work.	Officer-in-charge.	Description of Work.	Value of Work at Ordinary Contract Rates.			Amount Spent.					Ratio of Famine to Ordinary rates.	Famine Rates.		Remarks.
				Quantity.	Rate.	Amount.	Wages.	Gratuitous relief.	Special establishment.	Total including gratuitous relief.	Total excluding gratuitous relief.		Including gratuitous relief.	Excluding gratuitous relief.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
				Cft.	Rs. A.	Rs.	Rs.	Rs.	Rs.	Rs	Rs.	Ratio.	Rs. A.	Rs. A.	
							From 21st January 1897 to 28th February 1897.								
			Earth-work in soft soil.		Per 0/00. Cft.										
JUBBULPORE.	Kanhwara Tank. (Murwara Tahsil).	Pande Hanuman Prasad. and Sarju Prasad.	Lead 150′ Lift 5′	42,741	3 10	155							9 10	9 10	
			,, 150′–250′ ,, 10′	42,741	4 14	208							12 15	12 15	
			,, 250′–350′ ,, 10′	42,741	5 8	235							14 9	14 9	
			,, 350′–450′ ,, 10′	42,741	6 2	262	3,735	10	958	4,703	4,693	2·65 including gratuitous relief.	16 4	16 4	
			,, 450′–550′ ,, 10′	42,740	6 12	288							17 14	17 14	
			Earth-work, in soft moorum.									2·65 excluding gratuitous relief.			
			Lead 450′–550′ Lift 10′	71,235	8 12	623							23 3	23 3	
			Total ...	...	...	1,771	3,735	10	958	4,703	4,693				
							From 25th April 1897 to 24th May 1897.								
			Earth-work in soft soil.												
	Paraswara Tank. (Murwara Tahsil).	Debidin ...	Lead 50′ Lift 5′	134,936	3 0	405							6 11	6 6	
			,, 50′–150′ ,, 5′	134,936	3 10	489							8 2	7 11	
			,, 150′–250′ ,, 10′	67,468	4 14	329	2,902	178	482	3,562	3,384	2·24 including gratuitous relief.	10 15	10 5	
			,, 250′–350′ ,, 10′	67,469	5 8	371						2·12 excluding gratuitous relief.	12 5	11 10	
			Total ...	...	...	1,594	2,902	178	482	3,562	3,384				

						From 25th May 1897 to 18th July 1897.								
		Earth-work in soft soil.												
Durjanpur Tank. (Murwara Tahsil).	Debidin ...	Lead 50′, Lift 5′	192,020	3 0	576	3,992	158	651	4,801	4,643		6 6	6 2	
		„ 50′–150′ „ 5′	192,020	3 10	696							7 11	7 7	
		„ 150′–250′ „ 10′	96,010	4 14	468						2·12 including gratuitous relief.	10 5	10 0	
		„ 250′–350′ „ 10′	96,011	5 8	528						2·05 excluding gratuitous relief.	11 10	11 4	
		Total ...	...	...	2,268	3,992	158	651	4,801	4,643				
						From 11th May 1897 to 1st June 1897.								
		Earth-work in soft soil.												
Gairtalai Tank. (Murwara Tahsil).	Daduram ...	Lead 50′ Lift 5′	84,777	3 0	254	1,453	111	326	1,890	1,779		5 11	5 5	
		„ 50′–150′ „ 5′	84,777	3 10	307							6 14	6 7	
		„ 150′–250′ „ 10′	42,389	4 14	207						1·89 including gratuitous relief.	9 3	8 11	
		„ 250′–350′ „ 10′	42,389	5 8	233						1·78 excluding gratuitous relief.	10 6	9 13	
		Total ...	...	...	1,001	1,453	111	326	1,890	1,779				
						From 28th February 1897 to 29th April 1897.								
		Earth-work in soft soil.												
Nadawan Tank. (Murwara Tahsil).	Sarju Prasad and Bhairon Parsad, Malguzar.	Lead 50 Lift 5′	88,744	3 0	266	2,623	...	921	3,544	3,544		10 2	10 2	
		„ 50′–150′ „ 5′	88,744	3 10	322							12 4	12 4	
		„ 150′–250′ „ 10′	44,372	4 14	216						3·38 including gratuitous relief.	16 8	16 8	
		„ 250′–350′ „ 10′	44,372	5 8	244						3·38 excluding gratuitous relief.	18 9	18 9	
		Total ...	...	...	1,048	2,623	...	921	3,544	3,544				

District.	Name of Work.	Officer-in-charge.	Description of Work.	Value of Work at Ordinary Contract Rates.			Amount Spent.					Ratio of Famine to Ordinary rates.	Famine Rates.		Remarks.
				Quantity.	Rates.	Amount.	Wages.	Gratuitous relief.	Special establishment.	Total including gratuitous relief.	Total excluding gratuitous relief.		Including gratuitous relief.	Excluding gratuitous relief.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
				Cft.	Rs. A.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Ratio.	Rs. A.	Rs. A.	
			Earth-work in soft soil.		Per 0/00 Cft.		*From 6th May 1897 to 16th June 1897.*								
JUBBULPORE.—*(Contd.)*	Karaila Tank. (Murwara Tahsil).	Hazari Lal (Sarju Prasad for 11 days).	Lead 50′—Lift 5′	86,935	3 0	261	3,481	...	391	3,872	3,872	3·67 including gratuitous relief.	11 0	11 0	
			,, 50′—150′ ,, 5′	86,935	3 10	315							13 5	13 5	
			,, 150′–250′ ,, 10′	28,978	4 14	141							17 14	17 14	
			,, 250′–350′ ,, 10′	28,978	5 8	159						3·67 excluding gratuitous relief.	20 3	20 3	
			,, 350–450′ ,, 10′	28,978	6 2	177							22 8	22 8	
			Total ...	...	...	1,053	3,481	...	391	3,872	3,872				
			Earth-work in soft soil				*From 22nd May 1897 to 2nd June 1897.*								
	Khama Tank. (Sehora Tahsil).	Mr. Muhammad Yasin Khan.	Lead 50′ Lift 10′	23,627	3 10	86	1,136	372	133	1,641	1,269	2·40 including gratuitous relief.	8 11	6 12	High rate due to over 90 per cent. of workers being women who, as a rule, were encumbered with children of all ages; women are bad diggers and the proportion of diggers to carriers was of course much larger than if there had been a fair proportion of male diggers.
			,, 150′ ,, 10′	73,127	4 4	311						1·86 excluding gratuitous relief.	10 3	7 14	
			,, 250′ ,, 10′	44,947	4 14	219							11 11	9 1	
			,, 350′ ,, 10′	7,613	5 8	42							13 3	10 4	
			,, 450′ ,, 10′	3,009	6 2	18							14 11	11 6	
			,, 500′ ,, 10′	450	6 12	3							16 3	12 8	
			,, 750′ ,, 10′	200	8 12	2							20 6	16 4	
			Total ...	...	...	681	1,136	372	133	1,641	1,269				

		Earth-work.				*From 24th January 1897 to 22nd May 1897.*							
Ganiyari Tank. (Sehora Tahsil.)	Mr. Muhammad Yasin Khan.	Lead 50′ Lift. 10′	148,262	3 10	537							7 2	6 6
		„ 150′ „ 10′	222,162	4 4	944							8 6	7 8
		„ 250′ „ 10′	170,397	4 14	831							9 9	8 9
		„ 350′ „ 10′	36,197	5 8	199							10 13	9 11
		„ 450′ „ 10′	37,402	6 2	229							12 1	10 12
		„ 550′ „ 10′	19,731	6 12	133							13 5	11 14
		„ 650′ „ 10′	24,170	7 6	178							14 8	13 0
		„ 750′ „ 10′	18,696	8 0	150							15 12	14 1
		„ 850′ „ 10′	12,611	8 10	109	7,854	1,076	1,000	9,930	8,854	1·97 including gratuitous relief.	17 0	15 3
		„ 950′ „ 10′	25,228	9 4	233						1·76 excluding gratuitous relief.	18 4	16 4
		„ 1,050′ „ 10′	15,580	9 14	154							19 7	17 6
		„ 1,100′ „ 10′	375	10 8	4							20 11	18 8
		Moorum	100,000	2 0	200							3 15	3 8
		Earth-work. Lift over 15′.	300,000	1 4	375							2 7	2 3
		Hutting made by workers 12′ broad for Poor-house, Hospital, Cholera Shed, Hospital Assistant's quarters, &c.	Ft. 200	3 12 per Rft.	750							7 6	6 9
		Total ...	...	...	5,026	7,854	1,076	1,000	9,930	8,854			

District.	Name of Work.	Officer-in-charge.	Description of Work.	Value of Work at Ordinary Contract Rates.			Amount Spent.					Ratio of Famine to Ordinary rates.	Famine Rates.		Remarks.
				Quantity.	Rates.	Amount.	Wages.	Gratuitous relief.	Special establishment.	Total including gratuitous relief.	Total excluding gratuitous relief.		Including gratuitous relief.	Excluding gratuitous relief.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
				Cft.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Ratio.	Rs. A.	Rs. A.	
							From 17th January 1897 to 2nd May 1897.								
			Earth-work.		Per o/oo Cft.										
JUBBULPORE.—(*Contd.*)	Gora Tank. (Sehora Tahsil).	Mr. Muhammad Yasin Khan, Mr. Sheo Charan Lal, Mr. Bakir Husain and Mr. Madho Prasad.	Lead 50′–150′ Lift 10′	103,684	4 4	440	8,511	889	993	10,393	9,504	2·29 including gratuitous relief. 2·09 excluding gratuitous relief.	9 11	8 14	High rates due to the following:— (1) Work was started in a hurry by an Officer-in-charge totally without experience, to relieve the pressure on the Silondi Relief-centre, where there were over 7,000 persons doing nothing, and 3,000 persons were put on to this work within three days without any arrangement for tasks, &c.
			,, 150′–250′ ,, 10′	147,923	4 14	721							11 3	10 3	
			,, 250′–350′ ,, 10′	66,642	5 8	366							12 9	11 7	
			,, 350′–450′ ,, 10′	76,754	6 2	470							14 0	12 13	(2) The condition of a large number of the workers was appalling at the opening of the work.
			,, 450′–550′ ,, 10′	34,667	6 12	234							15 7	14 2	
			,, 550′–650′ ,, 10	28,073	7 6	207							16 14	15 7	(3) The supervision by the three first Officers-in-charge was poor, and the fact that the ratios are comparatively good is due to the fact that as a rule no gangs were employed on miscellaneous works; the hutting as compared with other local works in the circle was small, as most of the workers lived within a radius of 5 miles, and that materials were available within easy reach.
			,, 650′–750′ ,, 10	133,442	8 0	1,067							18 5	16 11	
			,, 750′–850′ ,, 10	90,658	8 10	782							19 12	18 0	
			,, 850′–950′ ,, 10	26,503	9 4	245							21 3	19 5	
			Total	...	...	4,532	8,511	889	993	10,393	9,504				

						From 2nd May 1897 to 4th June 1897.								
		Earth-work in soft soil.												
Improving Khamaria Tank. (Sehora Tahsil).	Mr. Muhammad Yasin Khan.	Lead 50′ Lift 5′	32,513	3 0	97	1,583	324	197	2,104	1,780	2·50 including gratuitous relief.	7 7	6 5	High rates due to— (1) over 90 per cent. of the workers being women unaccustomed to digging, and, (2) stickiness of the soil owing to the tanks having been partly drained to allow of excavation from the bed of tank.
		„ 50′–150′ „ 10′	53,438	4 4	227							10 9	8 15	
		„ 150′–250′ „ 10′	36,402	4 14	177							12 2	10 4	
		„ 250′–350′ „ 10′	34,621	5 8	190							13 11	11 9	
		„ 350′–450′ „ 10′	9,046	6 2	55						2·12 excluding gratuitous relief.	15 4	12 14	
		„ 450′–550′ „ 10′	12,122	6 12	82							16 13	14 3	
		„ 550′–650′ „ 10′	1,623	7 6	12							19 0	15 8	
		Total ...	...	...	840	1,583	324	197	2,104	1,780				
						From 2nd May 1897 to 13th June 1897.								
		Earth-work in soft soil.												
Magholi Tank. (Sehora Tahsil).	Mr. Abdul Karim and Bansidhar.	Lead 150′ Lift 10′	374,442	4 4	1,591	4,068	391	281	4,740	4,349	3·00 including gratuitous relief. 2·73 excluding gratuitous relief.	13 3	11 10	Condition of workers very poor.
						From 28th March 1897 to 2nd May 1897.								
		Earth-work in soft soil.												
Constructing Bakal Tank. (Sehora Tahsil).	Bansidhar ...	Lead under 100′ Lift under 5′	127,616	3 10	462	3,759	23	226	4,008	3985	2·59 including gratuitous relief.	9 6	9 5	High rate due to very poor condition of workers.
		Lead 150′ Lift 10′	255,234	4 4	1,084						2·57 excluding gratuitous relief.	12 10	12 9	
		Total ...	...	...	1,546	3759	23	226	4,008	3985				

JUBBULPORE.—(*Contd.*)

District.	Name of Work.	Officer-in-charge.	Description of Work.	Value of Work at Ordinary Contract Rates.			Amount Spent.					Ratio of Famine to Ordinary rates.	Famine Rates.		Remarks.
				Quantity.	Rate.	Amount.	Wages.	Gratuitous relief.	Special establishment.	Total including gratuitous relief.	Total excluding gratuitous relief.		Including gratuitous relief.	Excluding gratuitous relief.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
				Cft.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Ratio.	Rs. A.	Rs. A.	
							From 15th January 1897 to 28th March 1897.								
			Earth-work in soft soil.		Per 0/00 Cft.										
	Majhgawan Tank Local Relief Work. (Sehora Tahsil).	Bansidar ...	Lead 150′ Lift 10′ ...	395,290	4 4	1,679	2,961	31	165	3 157	3,126	1·88 including gratuitous relief. 1·86 excluding gratuitous relief.	8 0	7 14	
							From 16th April 1897 to 19th May 1897.								
			Earth-work in soft soil.												
	Digging Bailkhera Tank (Jubbulpore Tahsil)	Madho Rao.	Lead 50′ Lift 10′ ...	471,683	3 10	1,710	1,816	66	439	2,321	2,255	1·35 including gratuitous relief. 1·31 excluding gratuitous relief.	4 14	4 12	
			,, 100′ Lift 5′ ...												

		Earth-work in soft soil.			*From 19th July 1897 to 14th October 1897.*								
Karitalai-Bijeraghogarh Road. (Murwara Tahsil).	Debidin ...	Lead 50′ Lift 5′ ...	300,327	3 0	901	6,773	174	1,881	8,828	8,654	2·21 including gratuitous relief.	6 10	6 8
		Soft moorum.									2·16 excluding gratuitous relief.		
		Lead 50′ Lift 5′ ...	450,491	5 0	2,252							11 0	10 13
		„ 50–150 „ 5′...	150,163	5 10	845							12 7	12 2
		Total ...	...	...	3,998	6,773	174	1,881	8,828	8,654			
		Earth-work in soft moorum.			*From 12th February 1897 to 1st March 1897.*								
Murwara-Barhi Road. (Murwara Tahsil).	Munshi Parmanand.	Lead 50′ Lift 5′.	112,182	5 0	561	2,456	5	907	3,368	3,363	2·82 including gratuitous relief.	14 2	14 2
		„ 50′–150 „ 5′.	112,182	5 10	631						2·82 excluding gratuitous relief.	15 14	15 14
		Total ...	...	...	1,192	2,456	5	907	3,368	3,363			
					From 2nd June 1897 to 18th September 1897.								
		Earth-work in soft soil.											
Kudri-Barhi Road. (Murwara Tahsil).	Daduram ..	Lead 50′ Lift 5′	313,319	3 0	940	6,164	....	1,464	7,628	7,628		8 15	8 15
		„ 50–150′ „ 5′	313,319	3 10	1,136							10 13	10 13
		Earth-work in soft moorum.									2·99 including gratuitous relief.		
		Lead 250′-350′ Lift 5′	40,000	6 14	275						2·99 excluding gratuitous relief.	20 9	20 9
				Per c/c Cft.								1 8	1 8
		Consolidating moorum.	40,000	0 8	200								
		Total ...	...	...	2,551	6,164	...	1,464	7,628	7,628			

District.	Name of Work.	Officer-in-charge.	Description of Work.	Value of Work at Ordinary Contract Rates.			Amount Spent.					Ratio of Famine to Ordinary rates.	Famine Rates.		Remarks.
				Quantity.	Rate.	Wages.	Wages.	Gratuitous relief.	Special establishment.	Total including gratuitous relief.	Total excluding gratuitous relief.		Including gratuitous relief.	Excluding gratuitous relief.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
				Cft.	Rs. A.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Ratio.	Rs. A.	Rs. A.	
JUBBULPORE.—(*Contd.*)			*Earth-work in soft moorum.*		Per o/oo Cft.		*From 19th September 1897 to 19th October 1897.*								
	Jhiria-Barhi Road (Murwara Tahsil).	Daduram (and Kuar Bahadur Singh for 4 days only).	Lead 350′–450′ Lift 5″.	77,797	7 8	583	1,854	...	817	2,671	2,671	2·75 including gratuitous relief.	20 10	20 10	
			Consolidating moorum.	77,797	Per o/o Cft. o 8	389						2·75 excluding gratuitous relief.	1 6	1 6	
			Total ...	...	...	972	1,854	...	817	2,671	2,671				
							From 1st April 1897 to 6th May 1897, and from 16th June 1897 to 31st July 1897.								
			Earth-work in soft soil.		Per o/oo Cft.										
	Barhi-Khitoli Road (Murwara Tahsil).	Hazari Lal.	Lead 50′, Lift 5′	304,851	3 0	915							7 2	7 2	
			Earth-work in soft moorum.				3,270	...	2,274	5,544	5,544	2·37 including gratuitous relief.			
			Average Lead 650′–750′, Lift 5′.	152,425	9 6	1,429						2·37 excluding gratuitous relief.	22 3	22 3	
			Total ...	...	...	2,344	3,270	...	2,274	5,544	5,544				

		Earth-work in soft soil.			*From 1st August 1897 to 13th October 1897.*								
Khitoli-Badwara Road. (Murwara Tahsil).	Hazari Lal from 1st August 1897 to 16th September 1897.	Lead 50′ Lift 5′	253,252	3 0	760	3,839	...	824	4,663	4,663	4·37 including gratuitous relief.	13 2	13 2
		„ 50′—150 „ 5′	84,417	3 10	306						4·37 excluding gratuitous relief.	15 13	15 13
	Kuar Bahadur Singh from 17th September 1897 to 13th October 1897.												
					1,066	3,839	...	824	4,663	4,663			
		Carriage of moorum.		Per o/o Cft.	*From 18th May 1897 to 13th October 1897.*								
Majhgawan-Khitola Road. (Sehora Tahsil).	Mr. Tatia Balwant.	Lead ¼ mile ...	106,234	0 6	398	6,680	2,304	1,205	10,189	7,885	3·14 including gratuitous relief.	1 3	0 14
		„ ½ „ ...	12,691	0 10	80							1 15	1 8
		„ ¾ „ ...	14,103	0 14	123							2 12	2 2
		„ 1 „ ...	8,082	1 2	90							3 9	2 12
		„ 1¼ „ ..	15,832	1 6	217							4 5	3 5
		„ 1½ „ ...	4,894	1 10	80							5 2	15
		„ 1¾ „ ...	8,552	1 14	160						2·43 excluding gratuitous relief.	5 14	4 8
		Moorum dug ...	121,000	0 8	605							1 9	1 3
		„ *consolidated.*	110,000	0 8	550							1 9	1 3
			Sq. ft.	Per Sq. ft.									
		Value of huts for Poor-house 25′ × 12′ × 10′.	3,000	0 5	937							1 0	0 12
					3,240	6,680	2,304	1,205	10,189	7,885			

District.	Name of Work.	Officer-in-charge.	Description of Work.	Value of Work at Ordinary Contract Rates.			Amount Spent.					Ratio of Famine to Ordinary rates.	Famine Rates.		Remarks.
				Quantity.	Rate.	Amount.	Wages.	Gratuitous relief.	Special establishment.	Total including gratuitous relief.	Total excluding gratuitous relief.		Including gratuitous relief.	Excluding gratuitous relief.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
JUBBULPORE.—*Contd.*				Cft.	Rs. A.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Ratio.	Rs. A.	Rs. A.	
			Earth-work in soft soil.		Per o/oo Cft.		*From 8th May 1897 to 31st October 1897.*								
	Constructing Majholi Road. Length 3¾ miles. (Sehora Tahsil.)	Karim-u d-din.	Lead under 50'. Lift under 5'.	693,000	3 0	2,079							10 3	10 0	Condition of workers during July and August very poor.
			Digging moorum ...	80,644	0 8	403							1 11	1 10	
			Carrying moorum 1 mile.	23,644	1 2	266	13,162	254	1,326	14,742	14,488	3·40 including gratuitous relief.	3 13	3 12	
			Do. 2 miles.	57,000	2 4	1,282						3·34 excluding gratuitous relief.	7 10	7 10	
			Consolidating moorum.	57,000	0 8	285							1 11	1 10	
			Collecting boulders..	700	3 8	25							11 14	11 11	
			Total ...			4,340	13,162	254	1,326	14,742	14,488				
			Earth-work.		Per o/oo Cft.		*From 1st January 1897 to 15th October 1897.*								
	Baraji Tank ...	Mr. J. D. Anthony.	Lead 600' Lift under 5'	820,765	6 12	5,540							18 14	18 4	
	Ranital ...		„ 200' „ 5'	553·553	4 4	2,353							11 14	11 8	
	Phutatal ...		„ 300 „ 5'	443,850	4 14	2,164							13 10	13 3	
	Galgullatal ...		„ 500 „ 5'	1,748,464	6 2	10,709							17 2	16 9	

JUBBULPORE.—(*Concld.*)													
Road from R. A. Theatre to District Court.	Mr. J. D. Anthoney.	*Metal consolidation and spreading.*	44,450										
Road from Marhatal to arched bridge, Great Indian Peninsula Railway.		Do.	27,965										
Road from Umti bridge to Great Indian Peninsula Ry. Bridge No. 3.		Do.	23,861	Per o/o Cft.		55,565	3,024	11,319	69,908	66,884	2·80 including gratuitious relief.		
Road from Morris' Road to Bridge No. 1.		Do.	4,536	1 8	2,352						2·70 excluding gratuitious relief.	4 3	4 1
Road from Mr. Payne's Bungalow to Nagpur Road-junction.		Do.	1,062										
Road from Belbagh junction to Satpula junction.		Do.	40,515										
Road from Sleeman Road to Bridge No. 9.		Do.	14,473										
		Moorum digging ...	186,493	0 8	932							1 6	1 6
		Carriage of moorum ¼ mile.	186,493	0 6	699							1 1	1 0
		Total ...	...	...	24,749	55,565	3,024	11,319	69,908	66,884			
				Per o/oo Cft.		*From 27th January 1897 to 1st June 1897.*							
Satpula Camp ...	Jogesh Chandra Chatterji.	*Earth-work* ...	44,352	3 0	132							11 15	11 10
				Per o/o Cft.		34,808	1,103	* 6,339	42,250	41,147	3·98 including gratuitous relief.		
		Metal breaking ...	270,637	3 0	8,119							11 15	11 10
		Collecting boulders.	66,982	3 8	2,344						3·88 excluding gratuitous relief.	13 15	13 9
		Total ...	...	...	10,595	34,808	1,103	6,339	42,250	41,147			
		TOTAL FOR JUBBULPORE DISTRICT.	...	...	81,387	1,84,445	10,493	35,519	2,30,457	2,19 964			

Gangs were being always sent out on miscellaneous works on which no value can be assessed, *e. g.*, 3 gangs for 7 months at poor-house; gangs for conservancy in the city, &c.

* Including nearly Rs. 5,000 for tools alone, which were made over to Public Works Department.

(1) Owing to want of tools at commencement the work was much hampered.

(2) Some minor works were done for which no value can be assigned.

District.	Name of Work.	Officer-in-charge.	Description of Work.	Value of Work at Ordinary Contract Rates.			Amount Spent.					Ratio of Famine to Ordinary rates.	Famine Rates.		Remarks.
				Quantity.	Rate.	Amount.	Wages.	Gratuitous relief.	Special establishment.	Total including gratuitous relief.	Total excluding gratuitous relief.		Including gratuitous relief.	Excluding gratuitous relief.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
				Cft.	Rs. A.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Ratio.	Rs. A.	Rs. A.	
					Per o/oo Cft.		*From 20th November 1896 to 24th October 1897.*								
MANDLA.	Mandla Local Work. (Mandla Tahsil).	Nur Mahammad.	*Earth-work.* ...	900,100	3 12	3,375	4,500	1,140	23	5,663	4,523	1·91 including gratuitous relief.	7 2	6 2	
			,, Lead 16 chains.	312,000	7 8	2,340	2,263	272	68	2,603	2,331	1·64 excluding gratuitous relief.	14 4	12 4	
					Per o/o Cft.										
			Moorum collection, Lead 1¼ mile ...	179,925	2 6	4,273	10,401	1,083	190	11,674	10,591		4 8	3 14	
			Construction of Pucca masonry bridges.	8,300	17 0	1,411	1,409	463	497	2,369	1,906		32 7	27 14	
			Stone pavement in mud.	15,720	6 0	943	950	434	52	1,436	1,002		11 7	9 13	
			Metal breaking, Lead 20 chains.	10,000	4 0	400	500	75	25	600	525		7 10	6 9	
						12,742	20,023	3,467	855	24,345	20,878				
							From 4th July 1896 to 17th October 1897.								
	Chargaon Ghat. (Mandla Tahsil).	(1) Sheikh Kodu. (2) Palarum...	*Soft moorum digging.*	624,800	0 8	3,124	4,709	313	...	5,022	4,709	1·60 including gratuitous relief. 1·50 excluding gratuitous relief.	0 13	0 12	

				Per o/oo Cft.		*From 21st December 1896 to 3rd June 1897.*							
Pondi Tank (Mandla Tahsil).	Sheik Kodu...	*Earth-work* ...	900,000	3 0	2,700	3,274	101	...	3,375	3,274	1·25 including gratuitous relief. 1·21 excluding gratuitous relief.	3 12	3 10
						From 23rd December 1896 to 5th September 1897.							
Kanhargaon Tank (Mandla Tahsil)..	Mahgu, Patwari.	*Earth-work* ...	750,750	3 0	2,252	4,697	118	740	5,555	5,437	2·47 including gratuitous relief. 2·41 excluding gratuitous relief.	7 7	7 4
						From 6th September 1897 to 2nd November 1897.							
Kanhargaon Ghat. (Mandla Tahsil).	Mahgu, Patwari.	*Earth-work* ...	62,348	3 0	187	760	27	171	958	931	5·12 including gratuitous relief. 5·00 excluding gratuitous relief.	15 6	15 0
						From 27th June 1897 to 28th October 1897.							
Road from Manegaon to Ringjhari. (Mandla Tahsil).	Lachmi Narain.	*Earth-work* ...	365,195	3 0	1,095	2,156	258	77	2,491	2,233	2·27 including gratuitous relief. 2.04 excluding gratuitous relief.	6 13	6 2

Name of Work.	Officer-in-charge.	Description of Work.	Value of Work at Ordinary Contract Rates.			Amount Spent.					Ratio of Famine to Ordinary rates.	Famine Rates.		Remarks.
			Quantity.	Rate.	Amount.	Wages.	Gratuitous relief.	Special establishment.	Total including gratuitous relief.	Total excluding gratuitous relief.		Including gratuitous relief.	Excluding gratuitous relief.	
2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
			Cft.	Rs. A.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Ratio.	Rs. A.	Rs. A.	
						From 24th December 1896 to 26th June 1897.								
Manegaon Tank. (Mandla Tahsil).	Lachmi Narain.	*Earth-work* ...	556,900	Per o/oo Cft. 3 0	1,671	2,578	172	82	2,832	2,660	1·69 including gratuitous relief. 1·59 excluding gratuitous relief.	5 1	4 12	
						From 25th December 1896 to 28th August 1897.								
Pithera Tank. (Mandla Tahsil).	Irsi Pershad.	*Earth-work* ...	468,996	3 0	1,407	4,655	395	847	5,897	5,502	3·92 including gratuitous relief	11 12	10 15	
		Stone collection ...	19,111	Per o/o Cft. 0 8	96						3·66 excluding gratuitous relief.	1 15	1 13	
		Total ...	...	...	1,503	4,655	395	847	5,897	5,502				
						From 29th August 1897 to 19th October 1897.								
Road from Tikaria to Narainganj. (Mandla Tahsil).	Irsi Pershad.	*Earth-work* ...	38,997	Per o/oo Cft. 3 0	117	1,655	...	56	1,711	1,711	7·81 including gratuitous relief.	23 7	23 7	
		Moorum digging ...	20,484	Per o/o Cft. 0 8	102						7·81 excluding gratuitous relief.	3 14	3 14	
		Total ...	...	...	219	1,655	...	56	1,711	1,711				

						From 26th December 1896 to 27th June 1897.							
Bichia Tank. (Mandla Tahsil).	Ramcharan-lal.	*Earth-work* ..	209,490	Per o/oo Cft. 3 0	628	2,600	370	32	3,002	2,632	4·78 including gratuitous relief. 4·19 excluding gratuitous relief.	14 5	12 9
						From 22nd December 1896 to 27th June 1897.							
Nandram Tank. (Mandla Tahsil).	Raghonath Pershad.	*Earth-work* ..	199,284	3 0	598	3,666	228	42	3 936	3,708	6·58 including gratuitous relief. 6·20 excluding gratuitous relief.	19 12	18 10
						From 26th January 1897 to 16th October 1897.							
Constructing road from Dindori Tahsil to meet Mandla Main Road. (Ramgarh Tahsil).	Tahsildar of Ramgarh.	*Earth-work in soft soil.*	3,403	3 0	10							22 9	21 8
		Moorum excavation.	114,599	Per o/o Cft. 0 8	573	3 942	214	296	4,452	4,238	7·52 including gratuitous relief. 7·16 excluding gratuitous relief.	3 11	3 9
		Collecting boulders.	250	3 8	9							26 5	25 1
		Total ..	...	...	592	3 942	214	295	4,452	4,238			
						From 3rd April 1897 to 16th June 1897.							
Sakwar Ryotwari Tank. (Ramgarh Tahsil).	Jungi Nath, Additional Tahsildar.	*Earth-work* ...	33 382	Per o/oo Cft. 3 0	100	428	33	1	462	429	4 62 including gratuitous relief. 4·29 excluding gratuitous relief.	13 14	12 14
						From 22nd April 1897 to 20th June 1897.							
Merhli Ryotwari Tank. (Ramgarh Tahsil).	Jungi Nath, Additional Tahsildar.	*Earth-work* ..	30,564	3 0	91	327	40	2	369	329	4·05 including gratuitous relief. 3·61 excluding gratuitous relief.	12 2	10 13

District.	Name of Work.	Officer-in-charge.	Description of Work.	Value of Work at Ordinary Contract Rates.			Amount Spent.					Ratio of Famine to Ordinary rates.	Famine Rates.		Remarks.
				Quantity.	Rate.	Amount.	Wages.	Gratuitous relief.	Special establishment.	Total including gratuitous relief.	Total excluding gratuitous relief.		Including gratuitous relief.	Excluding gratuitous relief.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
				Cft.	Rs. A.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Ratio.	Rs A.	Rs. A	
					Per 0/00 Cft.		*From 23rd December 1895 to 31st October 1897.*								
MANDLA.—(*Contd.*)	Kaneri Tank. (Ramgarh Tahsil).	Bijlal, Patwari	*Earth-work* ...	169,150	3 0	507	2,847	253	20	3,120	2,867	5·15 including gratuitous relief. 5·65 excluding gratuitous relief	18 7	16 15	
	Katangi Village Road. (Ramgarh Tahsil).	Bijlal, Patwari.					*From 23rd December 1895 to 31st October 1897.*								
			Earth-work ...	8,415	3 0	25							18 8	16 1	
			Moorum ...	6,750	5 0	34							30 13	26 13	
			Moorum with boulders	34,620	6 4	215	1,779	259	2	2,040	1,781	6·16 including gratuitous relief. 5·35 excluding gratuitous relief.	38 8	33 8	
			Surface dressing ..	Chains 78	Per chain. 0 12	58							4 10	4 0	
			Total ...	...	...	333	1,779	259	2	2,040	1,781				
				Cft.	Per 0/00 Cft.		*From 23rd December 1895 to 22nd June 1897.*								
	Mahadwani Tank. (Ramgarh Tahsil).	Abdul Rahim.	*Earth-work* ...	158,889	3 0	476	3,231	347	26	3,604	3,257	6·42 including gratuitous relief. 5·80 excluding gratuitous relief.	19 4	17 6	
			Earth-work with boulders.	17,024	5 0	85							32 2	29 0	
			Total ..	...	...	561	3,231	347	26	3,604	3,257				

						From 23rd June 1897 to 1st November 1897.							
Dadargaon Road. (Ramgarh Tahsil).	Abdul Rahim.	*Earth-work* ...	152,953	3 0	459	2,355	217	16	2,588	2,371	4·4 including gratuitous relief	13 3	12 0
		Moorum with small boulders.	20,777	5 0	104							22 0	20 0
			Rft.	Per mile.							4·0 excluding gratuitous relief.		
		Ordinary jungle cutting.	20,631	6 0	23							26 6	24 0
		Thick „ ...	1,515	15 0	4							66 0	60 0
		Total ...	...	...	590	2,355	217	16	2,588	2,371			
			Cft.	Per 0/00 Cft.		*From 27th March 1897 to 15th June 1897.*							
Ataria Ryotwari Tank. (Ramgarh Tahsil).	Jungi Nath, Additional Tahsildar.	*Earth-work* ...	23,028	3 0	69	464	38	3	505	467	7·3 including gratuitous relief.	21 14	20 6
											6·8 excluding gratuitous relief.		
						From 26th December 1896 to 25th October 1897.							
Manikpur Tank. (Ramgarh Tahsil).	Sobharam ...	*Earth-work* ...	116,447	3 0	349	3,467	480	57	4 004	3 524	11·47 including gratuitous relief.	34 6	30 4
											10·09 excluding gratuitous relief.		
						From 26th December 1896 to 25th October 1897.							
Manikpur Kasturi Road. (Ramgarh Tahsil).	Sobharam ...	*Hard moorum* ..	16,800	5 0	84	1,794	89	19	1,902	1,813	7·7 including gratuitous relief.	38 8	37 0
			Chains	Per chain									
		Surface dressing 12′	198½	0 12	148							5 11	5 8
			Cft.	Per c/o Cft.							7·4 excluding gratuitous relief.		
		Drystone filling in nullas.	720	2 0	14							15 6	14 13
		Total ...		...	246	1,794	89	19	1,902	1,813			

District.	Name of Work.	Officer-in-charge.	Description of Work.	Value of Work at Ordinary Contract Rates.			Amount Spent.					Ratio of Famine to Ordinary rates.	Famine Rates.		Remarks.
				Quantity.	Rate.	Amount.	Wages.	Gratuitous relief.	Special establishment.	Total including gratuitous relief.	Total excluding gratuitous relief.		Including gratuitous relief.	Excluding gratuitous relief.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
				Cft.	Rs. A. Per o/oo Cft.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Ratio.	Rs. A.	Rs. A.	
							From 28th December 1896 to 10th October 1897.								
MANDLA.—(*Contd.*)	Dudhera Tank. (Ramgarh Tahsil).	Ramjilal ...	*Earth-work* ..	145,032	3 0	435	2,236	276	34	2,546	2,270	5·9 including gratuitous relief. 5·2 excluding gratuitous relief.	17 11	15 10	
							From 28th December 1896 to 10th October 1897.								
	Mangarh Road. (Ramgarh Tahsil).	Ramjilal ...	*Earth-work* ...	30,913	3 0	93							19 3	17 6	
			Moorum with boulders.	3,556	6 4	22							40 0	36 4	
			Hard moorum ...	34,113	5 0	170	1,705	185	55	1,945	1,760	6·4 including gratuitous relief.	32 0	29 0	
			Jungle cutting, 16 miles.	1¼ mile.	Per mile. 15 0	19						5·8 excluding gratuitous relief.	96 0	87 0	
			Total ...	...	...	304	1,705	185	55	1,945	1,760				
							From 28th December 1896 to 10th October 1897.								
	Jamgaon Tank. (Ramgarh Tahsil).	Kampta Pershad.	*Earth-work* ..	Cft. 132,140	Per o/oo Cft. 3 0	395	2,627	418	14	3,059	2,641	7·7 including gratuitous relief. 6·7 excluding gratuitous relief.	23 2	20 2	

						From 31st January 1897 to 31st July 1897.							
Bakri Mohgaon Tank. (Ramgarh Tahsil).	Bhagwandas.	*Earth-work* ...	189,824	3 0	569	2,536	367	74	2,977	2,610	5·2 including gratuitous relief. 4·6 excluding gratuitous relief.	15 10	13 13
						From 12th February 1897 to 2nd November 1897.							
Jagatpore Road. (Ramgarh Tahsil).	Bhagwandas.	*Earth-work* ...	23,681	3 0	71							18 14	16 8
		Soft moorum ...	15,477	3 0	46							18 14	16 8
		Hard moorum with boulders.	47,238	6 4	295	2,240	310	80	2,630	2,320	6·3 including gratuitous relief.	39 6	34 6
		Ordinary jungle cutting.	1¼ mile.	Per mile. 6 0	8						5·5 excluding gratuitous relief.	37 13	33 0
		Total ...	...	...	420	2,240	310	80	2,630	2,320			
						From 30th December 1896 to 22nd June 1897.							
Chanbisa Tank. (Ramgarh Tahsil.)	Ganga Singh	*Earth-work* ...	Cft. 121,275	Per 0/00 Cft. 3 0	364							19 3	18 5
		,, *with boulders.*	8,662	5 0	43	2,884	117	12	3,013	2,896	6·4 including gratuitous relief.	32 0	30 8
		,, *big boulders.*	10,275	6 4	64						6·1 excluding gratuitous relief.	40 0	38 2
		Total ...	...	...	471	2,884	117	12	3,013	2,896			

District.	Name of Work.	Officer-in-charge.	Description of Work.	Value of Work at Ordinary Contract Rates.			Amount Spent.					Ratio of Famine to Ordinary rates.	Famine Rates.		Remarks.
				Quantity.	Rate.	Amount.	Wages.	Gratuitous relief.	Special establishment.	Total including gratuitous relief.	Total excluding gratuitous relief.		Including gratuitous relief.	Excluding gratuitous relief.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
				Cft.	Rs. A.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Ratio.	Rs. A.	Rs. A.	
							From 23rd June 1897 to 5th November 1897.								
MANDLA.—(*Contd.*)	Raighat Road. (Ramgarh Tahsil.)	Ganga Singh	*Earth-work* ...	60,215	Per o/oo Cft. 3 0	180	1,364	92	6	1,462	1,370	6·0 including gratuitous relief.	18 0	17 2	
			Moorum with boulders.	7,718	5 0	38							30 0	28 8	
			Ordinary jungle cutting.	Rft. 14,467	Per mile. 6 0	16							36 0	34 3	
			Thick jungle cutting.	2,490	15 0	7						5·7 excluding gratuitous relief.	90 0	85 8	
			Total ...	...	...	241	1,364	92	6	1,462	1,370				
							From 28th December 1896 to 10th October 1897.								
	Racho Road. (Ramgarh Tahsil.)	Kampta Pershad.	*Earth-work* ...	Cft. 50,400	Per o/oo Cft. 3 0	151	1,834	427	4	2,265	1,838	13·0 including gratuitous relief.	39 0	31 8	
			Moorum, soft ...	5,100	3 0	15							39 0	31 8	
			Surface dressing ...	Chains. 10·85	Per chain. 0 12	8						10·5 excluding gratuitous relief.	9 12	7 14	
			Total ...	...	...	174	1,834	427	4	2,265	1,838				

			Cft.	Per o/oo Cft.	*From 24th December 1896 to 26th June 1897.*									
Bhanswahi Tank ...	Jawahir Lal.	*Earth-work* ...	94,080	3 0	282	2,736	96	23	2,855	2,759	10·1 including gratuitous relief. 9·7 excluding gratuitous relief.	30 5	29 2	
					From 27th June 1897 to 21st October 1897.									
Sarasdole Ghat ...	Jawahir Lal.	*Earth-work* ...	67,500	3 0	202	1,682	239	7	1,928	1,689	4·7 including gratuitous relief.	14 2	12 5	
				Per o/o Cft.										
		Moorum digging ...	40,500	0 8	203						4·1 excluding gratuitous relief.	2 6	2 1	
		Total ...	...	...	405	1,682	239	7	1,928	1,689				
					From 23rd December 1896 to 3rd July 1897.									
				Per o/oo Cft.										
Aroli Tank ...	Brij Bhusan..	*Earth-work* ...	188,858	3 0	567	2,741	187	26	2,954	2,767	5·2 including gratuitous relief. 4·8 excluding gratuitous relief.	15 10	14 6	
					From 4th July 1897 to 10th September 1897.									
Bejegaon Ghat ...	Brij Bhusan.	*Earth-work* ...	36,960	3 0	111	903	142	...	1,045	903	9·4 including gratuitous relief. 8·1 excluding gratuitous relief.	28 3	24 5	

District.	Name of Work.	Officer-in-charge.	Description of Work.	Value of Work at Ordia by Contract Rates.			Amount Spent.					Ratio of Famine to Ordinary rates.	Famine Rates.		Remarks.
				Quantity.	Rate.	Amount.	Wages.	Gratuitous relief.	Special establishment.	Total including gratuitous relief.	Total excluding gratuitous relief.		Including gratuitous relief.	Excluding gratuitous relief.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
				Cft.	Rs. A.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Ratio.	Rs. A.	Rs. A.	
MANDLA.—(*Contd.*)							*From 21st December 1896 to 25th June 1897.*								
	Harbanspur Tank...	Sheopershad.	*Earth-work* ...	487,578	Per o/oo Cft. 3 0	1,462	3,695	158	41	3,894	3,736	2·6 including gratuitous relief. 2·5 excluding gratuitous relief.	7 13	7 8	
							From 26th June 1897 to 27th October 1897.								
	Pindrai Ghat ...	Sheopershad.	*Earth-work* ...	37,680	3 0	113	2,065	117	10	2,192	2,075	3·1 including gratuitous relief. 2·9 excluding gratuitous relief.	9 5	8 11	
			Moorum digging ...	118,800	Per o/o Cft. 0 8	594							1 9	1 8	
			Total ...	...	...	707	2,065	117	10	2,192	2,075				
							From 13th March 1897 to 31st July 1897.								
	Boda Chapri Ryotwari Tank.	Munshi Murtaza Husen, Additional Tahsildar.	*Earth-work* ...	156,006	Per o/oo Cft. 3 0	468	1,028	...	...	1,028	1,028	2·1 including gratuitous relief. 2·1 excluding gratuitous relief.	6 5	6 5	

					From 4th July 1897 to 19th October 1897.								
Ramtila Ghat ...	Rampershad.	*Earth-work* ...	33,750	3 0	101	1,616	164	27	1,807	1,643	1·1 including gratuitous relief.	3 5	3 0
				Per o/o Cft.									
		Moorum digging ...	295,650	0 8	1,478						1·0 excluding gratuitous relief.	0 9	0 8
		Total ...	...	...	1,579	1,616	164	27	1,807	1,643			
					From 27th June 1897 to 22nd October 1897.								
Khaloni Ghat ...	Ramcharan Lal.	*Moorum digging* ...	36,000	0 8	180	2,078	242	2	2,322	2,080	12·8 including gratuitous relief.	6 6	5 12
											11·5 excluding gratuitous relief.		
					From 27th June 1897 to 2nd November 1897.								
				Per o/oo Cft.									
Katigahan Ghat ...	Matadeen Dube and Raghunath Pershad.	*Earth-work* ...	28,300	3 0	85	1,966	316	43	2,325	2,009	6·5 including gratuitous relief.	19 8	16 13
				Per o/o Cft.									
		Moorum excavation	54,000	0 8	270						5·6 excluding gratuitous relief.	3 4	2 13
		Total ...	...	...	355	1,966	316	43	2,325	2,009			
				Per o/oo Cft.	*From 5th April 1897 to 7th July 1897.*								
Negawa, Ryotwari Tank.	Munshi Murtaza Husen, Additional Tahsildar.	*Earth-work* ...	174,300	3 0	523	1,232	...	...	1,232	1,232	2·3 including gratuitous relief.	6 14	6 14
											2·3 excluding gratuitous relief.		

District.	Name of Work.	Officer-in-charge.	Description of Work.	Value of Work at Ordinary Contract Rates.			Amount Spent.					Ratio of Famine to Ordinary rates.	Famine Rates.		Remarks.
				Quantity.	Rate.	Amount.	Wages.	Gratuitous relief.	Special establishment.	Total including gratuitous relief.	Total excluding gratuitous relief.		Including gratuitous relief.	Excluding gratuitous relief.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MANDLA.—(*Contd.*)				Cft.	Rs. A.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Ratio.	Rs. A.	Rs. A.	
					Per 0/00 Cft.	*From 5th April 1897 to 7th July 1897.*									
	Kolari Ryotwari Tank.	Munshi Murtaza Husen, Additional Tahsildar.	*Earth-work* ...	350,200	3 0	1,050	1,439	...	...	1,439	1,439	1·4 including gratuitous relief. 1·4 excluding gratuitous relief.	4 3	4 3	
						From 12th March 1897 to 31st July 1897.									
	Sara Ryotwari Tank.	Munshi Murtaza Husen, Additional Tahsildar.	*Earth-work* ...	2,63,328	3 0	790	1,245	...	...	1,245	1,245	1·5 including gratuitous relief. 1·5 excluding gratuitous relief.	4 8	4 8	
						From 30th March 1897 to 3rd July 1897.									
	Kisli Ryotwari Tank.	Munshi Murtaza Husen, Additional Tahsildar.	*Earth-work* ...	31,700	3 0	95	676	...	...	676	676	7·1 including gratuitous relief. 7·1 excluding gratuitous relief.	21 5	21 5	

MANDLA.—(*Concld.*)						*From 1st March 1897 to 30th June 1897.*								
	Ataria Ryotwari Tank.	Munshi Murtaza Husen, Additional Tahsildar.	*Earth-work* ...	56,100	3 0	168	820	...	...	820	820	4·8 including gratuitous relief. 4·8 excluding gratuitous relief.	14 6	14 6
						From 22nd April 1897 to 20th June 1897.								
	Boda Silli Ryotwari Tank.	Munshi Murtaza Husen, Additional Tahsildar.	*Earth-work* ...	150,050	3 0	450	888	...	...	888	888	1·9 including gratuitous relief. 1·9 excluding gratuitous relief.	5 11	5 11
			TOTAL FOR MANDLA DISTRICT.	...	...	42,359	1,15,643	11,272	3,802	1,30,717	1,19,445			
SEONI.						*From 29th December 1896 to 14th October 1897.*								
	Atari, Field Embanking. (Lakhnadon Tahsil).	Village Mukaddam.	*Earth-work.* Constructing field embankments. Soft soil. Lead under 50′ and Lift under 5′.	112,935	3 2	353	388	...	...	388	388	1·10 including gratuitous relief. 1·10 excluding gratuitous relief.	3 7	3 7
						From 29th December 1896 to 14th October 1897.								
	Ojhera Field Embanking. (Lakhnadon Tahsil).	Village Mukaddam.	*Earth-work.* Constructing field embankments. Soft soil. Lead under 50′ and Lift under 5′.	192,698	3 2	602	695	...	...	695	695	1·15 including gratuitous relief. 1·15 excluding gratuitous relief.	3 9	3 9
						From 29th December 1896 to 14th October 1897.								
	Chargaon Tank. (Lakhnadon Tahsil).	Mukaddam...	*Earth-work.* Constructing Tank bund and deepening Tank; Lead and Lift chiefly as before.	166,100	3 2	519	627	...	...	627	627	1·21 including gratuitous relief. 1·21 excluding gratuitous relief.	3 12	3 12

District.	Name of Work.	Officer-in-charge.	Description of Work.	Value of Work at Ordinary Contract Rates.			Amount Spent.					Ratio of Famine to Ordinary rates.	Famine Rates.		Remarks.
				Quantity.	Rate.	Amount.	Wages.	Gratuitous relief.	Special establishment.	Total including gratuitous relief.	Total excluding gratuitous relief.		Including gratuitous relief.	Excluding gratuitous relief.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
SEONI.—(*Contd.*)				Cft.	Rs. A.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Ratio.	Rs. A.	Rs. A.	
						From 29th December 1896 to 14th October 1897.									
			Earth-work.		Per 0/00 Cft.										
	Dharia Field Work (Lakhnadon Tahsil).	Mukaddam...	Field Bunds. Lead below 50′ and Lift below 5′. Hard soil.	32,582	3 2	102	270	...	...	270	270	2·65 including gratuitous relief. 2·65 excluding gratuitous relief.	8 4	8 4	
						From 29th December 1896 to 14th October 1897.									
			Earth-work.												
	Dongaria Field Work. (Lakhnadon Tahsil).	Mukaddam...	Field Bund. Lead and Lift as above. Hard soil.	118,784	3 2	371	373	...	...	373	373	1·00 including gratuitous relief. 1·00 excluding gratuitous relief.	3 2	3 2	
						From 29th December 1896 to 14th October 1897.									
			Earth-work.												
	Hamirgarh Field Work. (Lakhnadon Tahsil).	Mukaddam...	Constructing Field Bunds. Lead, Lift and soil as above.	128,069	3 2	400	559	...	...	559	559	1·40 including gratuitous relief. 1·40 excluding gratuitous relief.	4 6	4 6	
						From 29th December 1896 to 14th October 1897.									
			Earth-work.												
	Hinowtia Field Work. (Lakhnadon Tahsil).	Mukaddam..	Constructing Field Bunds. Lead, Lift and soil as above.	154,388	3 2	482	677	...	...	677	677	1·40 including gratuitous relief. 1·40 excluding gratuitous relief.	4 6	4 6	

		Earth-work.			*From 29th December 1896 to 14th October 1897.*									
Jamunpani Field Work. (Lakhnadon Tahsil.)	Mukaddam..	Constructing Field Bunds. Lead, Lift and soil as above.	51,041	3 2	159	244	...	...	244	244	1·53 including gratuitous relief. 1·53 excluding gratuitous relief.	4 12	4 12	
		Earth-work.			*From 29th December 1896 to 14th October 1897.*									
Joba Field Work. (Lakhnadon Tahsil.)	Mukaddam..	Constructing Field Bunds. Lead, Lift and soil as above.	116,799	3 2	365	495	...	...	495	495	1·35 including gratuitous relief. 1·35 excluding gratuitous relief.	4 3	4 3	
		Earth-work.			*From 29th December 1896 to 14th October 1897.*									
Khami Field Work (Lakhnadon Tahsil.)	Mukaddam..	Constructing Field Bunds. Lead, Lift and soil as above.	16,848	3 2	53	116	...	...	116	116	2·19 including gratuitous relief. 2·19 excluding gratuitous relief.	6 13	6 13	
		Earth-work.			*From 29th December 1896 to 14th October 1897.*									
Kerpani Field Work. (Lakhnadon Tahsil.)	Mukaddam..	Constructing Field Bunds. Lead, Lift and soil as above.	81,416	3 2	254	177	...	...	177	177	·70 including gratuitous relief. ·70 excluding gratuitous relief.	2 3	2 3	
		Earth-work.			*From 29th December 1896 to 14th October 1897.*									
Mahulpani Tank. (Lakhnadon Tahsil.)	Mukaddam..	Tank digging, soft soil. Lead below 50′ and Lift above 5′ in places.	477,862	3 2	1,493	803	...	...	803	803	·54 including gratuitous relief. ·54 excluding gratuitous relief.	1 11	1 11	
		Earth-work.			*From 29th December 1896 to 14th October 1897.*									
Moari Field Work. (Lakhnadon Tahsil.)	Mukaddam.	Field Work. Soil and Lead as above. Lift 5′.	95,639	3 2	299	313	...	...	313	313	1·05 including gratuitous relief. 1·05 excluding gratuitous relief.	3 4	3 4	

District.	Name of Work.	Officer-in-charge.	Description of Work.	Value of Work at Ordinary Contract Rates.			Amount Spent.					Ratio of Famine to Ordinary rates.	Famine Rates.		Remarks.
				Quantity.	Rate.	Amount.	Wages.	Gratuitous relief.	Special establishment.	Total including gratuitous relief.	Total excluding gratuitous relief.		Including gratuitous relief.	Excluding gratuitous relief.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
				Cft.	Rs. A. Per 0/00 Cft.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Ratio.	Rs. A.	Rs. A.	
			Earth-work.				*From 29th December 1896 to 14th October 1897.*								
SEONI.—(*Contd.*)	Nagtoria Field Work. (Lakhnadon Tahsil.)	Mukaddam.	Field Work. Soil and Lead as above. Lift 5'.	41,511	3 2	130	182	....	...	182	182	1·4 including gratuitous relief. 1·4 excluding gratuitous relief.	4 6	4 6	
			Earth-work.				*From 29th December 1896 to 14th October 1897.*								
	Parasia Tank Work. (Lakhnadon Tahsil.)	Mukaddam.	Digging Tank. Soil hard, Lead and Lift as above.	1,200,408	3 2	3,751	1,319	...	...	1,319	1,319	·35 including gratuitous relief. ·35 excluding gratuitous relief.	1 1	1 1	
			Earth-work.				*From 29th December 1896 to 14th October 1897.*								
	Patrai Field Work. (Lakhnadon Tahsil.)	Mukaddam.	Field Work. Soil, Lead and Lift as above.	87,005	3 2	272	300	...	...	300	300	1·10 including gratuitous relief. 1·10 excluding gratuitous relief.	3 7	3 7	
			Earth-work.				*From 29th December 1896 to 14th October 1897.*								
	Thaouree Field Work. (Lakhnadon Tahsil.)	Mukaddam.	Field Work. Soil, Lead and Lift as above.	27,234	3 2	85	88	...	...	88	88	1·04 including gratuitous relief. 1·04 excluding gratuitous relief.	3 4	3 4	
			Earth-work.				*From 29th December 1896 to 14th October 1897.*								
	Utekata Field Work. (Lakhnadon Tahsil.)	Mukaddam.	Field Work. Soil, Lead and Lift as above.	4,250	3 2	14	34	...	...	34	34	2·43 including gratuitous relief. 2·43 excluding gratuitous relief.	7 9	7 9	

					From 29th December 1896 to 14th October 1897.								
		Earth-work.											
Tuluf Field Work. (Lakhnadon Tahsil.)	Mukaddam...	Field Work. Soil, Lead and Lift as above.	56,816	3 2	177	358	...	...	358	358	2·01 including gratuitous relief. 2·01 excluding gratuitous relief.	6 4	6 4
					From 29th December 1896 to 14th October 1897.								
Kohka Field Work. (Lakhnadon Tahsil.)	Mukaddam...	*Field Work. Soil,* Lead and Lift as above. Soft soil.	25,310	3 2	79	51	...	...	51	51	·64 including gratuitous relief. ·64 excluding gratuitous relief.	2 4	2 4
		Earth-work.			*From 29th December 1896 to 14th October 1897.*								
Lakhnadon Tank Work. Constructing a Bund, and facing it with dry stone.	*Nil.*	Soft soil. Lead below 50′ and Lift 10′ average.	171,250	3 2 Per o/o Cft.	535							4 10	4 10
		Moorum soft. Lead below 50′ and Lift 10′.	80,500	0 9 Per o/oo Cft.	453	3,385	...	...	3,385	3,385	1·49 including gratuitous relief.	0 15 14 14	0 15 14 14
		Stone excavation. Soft rock.	3,000	10 0 Per o/o Cft.	30						1·49 excluding gratuitous relief.		
		Stone pitching (dry). Lead about 200′. Lift below 5′.	25,200	5 0	1,260							7 7	7 7
		Total ...			2,278	3,385	...	...	3,385	3,385			
		Earth-work.		Per o/oo Cft.	*From 29th December 1896 to 14th October 1897.*								
Adegaon Tank Work. (Lakhnadon Tahsil.)	Relief Centre Committee.	Deepening and Bunding Tank. Hard soil. Lead below 50′ and Lift below 10′.	276,000	3 2	862	1,453	776	...	2,229	1,453	2·58 including gratuitous relief. 1·68 excluding gratuitous relief.	8 1	5 4

District.	Name of Work.	Officer-in-charge.	Description of Work.	Value of Work at Ordinary Contract Rates.			Amount Spent.					Ratio of Famine to Ordinary rates.	Famine Rates.		Remarks.
				Quantity.	Rate.	Amount.	Wages.	Gratuitous relief.	Special establishment.	Total including gratuitous relief.	Total excluding gratuitous relief.		Including gratuitous relief.	Excluding gratuitous relief.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
				Cft.	Rs. A.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Ratio.	Rs. A.	Rs. A.	
SEONI.—(*Contd.*)			*Earth-work.*		Per o/oo Cft.		*From 29th December 1896 to 14th October 1897.*								
	Kedarpur Tank Work (Lakhnadon Tahsil).	Relief Centre Committee.	Digging tank and bunding it; soft moorum soil; lead 70 feet; lift about 12 feet.	250,560	3 2	783	2,798	404	..	3,202	2,798	4·08 including gratuitous relief. 3·57 excluding gratuitous relief.	12 12	11 2	
	Chapara Relief Centre (Lakhnadon Tahsil).	Relief Committee.					*From 29th December 1896 to 14th October 1897.*								
			Road works consisting of digging earth.	42,240	3 0	127							3 12	3 12	
			Moorum ...	42,240	5 0	211	1,016	...	...	1,016	1,016	1·25 including gratuitous relief.	6 4	6 4	
					Per o/o cft.										
			Stone collecting with lead between 15 and 160 feet.	42,240	1 2	475						1·25 excluding gratuitous relief.	1 6	1 6	
			Total ...	...	...	813	1,016	...	...	1,016	1,016				
			Earth-work.		Per o/oo Cft.		*From 29th December 1896 to 14th October 1897.*								
	Dhuma Tank Work. (Lakhnadon Tahsil)	Relief Committee.	Deepening and bunding tank; soil hard; lead below 50 feet; lift below 10 feet;	130,680	3 2	409	452	524	...	976	452	2·39 including gratuitous relief. 1·10 excluding gratuitous relief.	7 7	3 7	

Binjhawara Embankment. (Seoni Tahsil).	Khan Sahib Cowasjee M. Hathy Daru.	*Earth-work. Soft soil.*	51,049	3 0 Per o/o cft.	153	*From 29th December 1896 to 14th October 1897.* 812	49	78	939	890	1·64 including gratuitous relief. 1·55 excluding gratuitous relief.	4 13	4 10
		Piling up boulders.	970	1 0 Per o/oo cft.	10							1 10	1 9
		Ramming earth-work.	21,774	1 4	27							2 1	1 15
		Digging hard moorum.	17,787	7 8	133							12 5	11 10
		Digging soft moorum.	11,880	5 0	59							8 3	7 12
		Levelling and straightening surface of a nalla.	47,420	4 0	190							6 9	6 3
		Total ..	...	...	572	812	49	78	939	890			
Embanking Bori Tank. (Seoni Tahsil.)	Kewal Prashad, Reader, Deputy Commissioner's Court	*Earth-work. Soft soil.*	60,200	3 0	181	*From 29th December 1896 to 14th October 1897.* 277	2	18	297	295	1·65 including gratuitous relief. 1·63 excluding gratuitous relief.	4 15	4 14
Mohgaon Tank. (Seoni Tahsil.)	Biharilal, Manager, Court of Wards.	*Earth-work. Soft soil.*	90,000	3 0	270	*From 29th December 1896 to 14th October 1897.* 271	7	9	287	280	1·06 including gratuitous relief. 1·04 excluding gratuitous relief.	3 3	3 2
Belgaon Tank Work. (Seoni Tahsil.)	Biharilal, Manager, Court of Wards.	*Earth-work. Soft soil.*	282,880	3 0	849	*From 29th December 1896 to 14th October 1897.* 1,012	25	28	1,065	1,040	1·26 including gratuitous relief. 1·23 excluding gratuitous relief.	3 12	3 11

District.	Name of work.	Officer-in-charge.	Description of Work.	Value of Work at Ordinary Contract Rates.			Amount Spent.					Ratio of Famine to Ordinary rates.	Famine Rates.		Remarks.
				Quantity.	Rate.	Amount.	Wages.	Gratuitous relief.	Special establishment.	Total including gratuitous relief.	Total excluding gratuitous relief.		Including gratuitous relief.	Excluding gratuitous relief.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
				Cft.	Rs. A.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Ratio.	Rs. A.	Rs. A.	
							From 29th December 1896 to 14th October 1897.								
SEONI.—(*Contd.*)	Berghat Tank. (Seoni Tahsil.)	Mulchand, School Master.	*Earth-work. Soft soil.*	272,000	Per o/oo Cft. 3 0	816	2,338	4	199	2,541	2,537	2·25 including gratuitous relief.	6 12	6 12	
			Consolidating moorum.	62,000	Per o/o Cft. 0 8	310						2·25 excluding gratuitous relief.	1 2	1 2	
			Total ...	...	...	1,126	2,338	4	199	2,541	2,537				
							From 29th December 1896 to 14th October 1897.								
	Gorejhola Road work. (Seoni Tahsil.)	Habibulla Khan, Forester.	*Road construction and forest cutting.*	181,368	Per o/oo Cft. 3 0	544	661	1	19	681	680	1·25 including gratuitous relief.	3 12	3 12	
												1·25 excluding gratuitous relief.			
							From 29th December 1896 to 14th October 1897.								
	Khamba Bijapani Road. (Seoni Tahsil.)	Rama Rao, Forest Ranger.	*Earth-work* ...	139,000	3 0	417	1,880	500	310	2,690	2,190	3·67 including gratuitous relief.	11 0	8 15	
			Digging hard soil or moorum.	28,000	7 8	210							27 8	22 7	
			Collecting boulders.	1,000	Per o/o cft. 1 0	10						2·99 excluding gratuitous relief.	3 11	3 0	
			Rooting out stumps of trees and levelling road.	23,760	Per o/oo cft. 4 0	95							14 11	12 0	
			Total ...	...	...	732	1,880	500	310	2,690	2,190				

SEONI.—(*Concld.*)						*From 29th December 1896 to 14th October 1897.*							
	Kurai Road Work. (Seoni Tahsil.)	Rama Rao, Forest Ranger.	*Earth-work* ...	77,616	3 0 Per o/o Cft.	233	787	...	...	787	787	1·78 including gratuitous relief.	5 4
			Digging, and carriage of moorum.	27,720	0 12	208						1·78 excluding gratuitous relief.	1 5
			Total ...	...	...	441	787	...	...	787	787		
			TOTAL FOR SEONI DISTRICT.	...	...	19,820	25,211	2,292	661	28,164	25,872		
SAUGOR.						*From 29th December 1896 to 14th October 1897.*							
	Deepening Tank at Jaisinager. (Saugor Tahsil.)	Bhairon Pershad.	*Earth-work* ...	358,418	Per o/oo Cft. 4 0	1,434	27,488	465	2,605	30,558	30,093	2·9 including gratuitous relief. 2·8 excluding gratuitous relief.	11 9
			Moorum ...	747,192	8 0	5,977							23 3
			Stone digging ...	230,309	Per o/o Cft. 1 3	2,734							3 8
			Puddling ...	36,142	1 8	542							4 5
			Total ...	...	...	10,687	27,488	465	2,605	30,558	30,093		

	5 4
	1 5
	11 3
	23 6
	3 6
	4 3

District.	Name of Work.	Officer-in-charge.	Description of Work.	Value of Work at Ordinary Contract Rates.			Amount Spent.					Ratio of Famine to Ordinary rates.	Famine Rates.		Remarks.
				Quantity.	Rate.	Amount.	Wages.	Gratuitous relief.	Special establishment.	Total including gratuitous relief.	Total excluding gratuitous relief.		Including gratuitous relief.	Excluding gratuitous relief.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
				Cft.	Rs. A.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Ratio.	Rs. A.	Rs. A.	
							From 29th December 1896 to 14th October 1897.								
					Per o/oo Cft.										
SAUGOR.—(*Contd.*)	Deepening Tank at Naraoli. (Saugor Tahsil.)	Sheoraj Sing.	*Earth-work* ...	1,225,741	6 0	7,354	11,343	361	1,994	13,698	13,337	1·86 including gratuitous relief. 1·80 excluding gratuitous relief.	11 2	10 13	Rate high owing to outbreak of cholera.
			Moorum ...	327,091	8 0	2,617	4,683	157	...	4,840	4,683	1·85 including gratuitous relief. 1·79 excluding gratuitous relief.	14 13	14 5	
					Per o/o Cft.										
			Lime masonry ...	3,404	16 0	544	...	...	516	516	516	·94 excluding gratuitous relief.	...	15 1	
			Lime plaster ...	7,102	3 0	213	...	...	204	204	204	·95 excluding gratuitous relief.	...	2 14	
			Lime pointing ...	1,946	2 0	39	...	..	389	389	389	10 excluding gratuitous relief.	...	20 0	
			Dry stone masonry.	34,744	7 0	2,430	...	...	1,669	1,669	1,669	·69 excluding gratuitous relief.	...	4 13	
			Flooring flags, in lime.	932	12 0	112	...	...	75	75	75	·66 excluding gratuitous relief.	...	7 15	
					Per o/oo Cft.										
			Earth-work ..	40,349	4 0	161	...	...	167	167	167	1·0 excluding gratuitous relief.	...	4 0	
					per o/o Cft.										
			Stone filling ..	700	3 0	21	....	...	10	10	10	·47 excluding gratuitous relief.	...	1 6	
					Per tree.										
			Cutting trees ...	40	0 4	10	...	...	10	10	10	1·00 excluding gratuitous relief.	...	0 4	
			Total ...	...	...	13,501	16,026	518	5,034	21,578	21,060				

				Per o/oo Cft.		*From 26th March 1897 to 20th July 1897.*							
Digging Khurai Tank (Khurai Tahsil.)	Murlidhar ...	*Earth-work. Soft soil.*	2,759,499	3 0	8,278	23,741	1,120	5,061	29,922	28,802	2·88 including gratuitous relief.	8 10	8 5	
		Moorum ..	420,689	5 0	2,103						2·77. excluding gratuitous relief.	14 6	13 14	
		Total ...	...	...	10,381	23,741	1,120	5,061	29,922	28,802				
						From 19th April 1897 to 28th June 1897.							
Diggging Teora Tank (Khurai Tahsil.)	Laxmi Pershad and Ilahi Bux.	*Earth-work. Soft soil.*	423,373	3 0	1,270	4102	311	1,654	6,067	5,756	3·38 including gratuitous relief.	10 2	9 10	High rate due to price of grain having averaged 8¼ seers.
		Earth-work. Hard soil.	130,710	4 0	523						3·20 excluding gratuitous relief.	13 8	12 13	
		Total ...	...	...	1,793	4,102	311	1,654	6,067	5,756				
						From 12th May 1897 to 28th June 1897.							
Construction of Kanjia-Karonda Road. (Khurai Tahsil.)	Nanhe Lal...	*Earth-work. Hard soil.*	117,950	4 0	472	2,978	185	545	3,708	3,523	7·86 including gratuitous relief.	31 7	29 13	High rate due to— (1) condition of the workers being somewhat poor, and (2) price of grain averaging 8 seers.
											7·46 excluding gratuitous relief.			
						From 31st January 1897 to 25th July 1897.							
Digging Phuller Tank. (Rehli Tahsil.)	Narain Pershad and Baliram.	*Earth-work. Soft soil.*	2,853,691	3 8	9,988	15,283	406	3,938	19,627	19,221	1·91 including gratuitous relief.	6 11	6 9	
		Moorum ...	55,733	5 0	279						1·87 excluding gratuitous relief.	9 9	9 6	
		Total ...	...	...	10,267	15,283	406	3,938	19,627	19,221				

District.	Name of Work.	Officer-in-charge.	Description of Work.	Value of Work at Ordinary Contract Rates.			Amount Spent.					Ratio of Famine to Ordinary rates.	Famine Rates.		Remarks.
				Quantity.	Rate.	Amount.	Wages.	Gratuitous relief.	Special establishment.	Total including gratuitous relief.	Total excluding gratuitous relief.		Including gratuitous relief.	Excluding gratuitous relief.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
				Cft.	Rs. A.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Ratio.	Rs. A.	Rs. A.	
							From 13th April 1897 to 31st October 1897.								
SAUGOR.—(*Contd.*)	Digging Banaika Tank. (Banda Tahsil.)	Vilayat Hussain.	*Earth-work. Hard soil.*	501,320	Per o/oo cft. 5 4	2,632	8,703	344	925	9,972	9,628	3·59 including gratuitous relief. 3·49 excluding gratuitous relief.	19 13	19 3	High rate due to outbreak of cholera and great heat of May and June.
			Masonry rubble stone in lime mortar.	2,125	Per o/o cft. 16 0	340	713	...	5	718	718		33 6	33 6	
			Total ...	...	...	2,972	9,416	344	930	10,690	10,346				
			Total for Saugor District.			50,073	99,034	3,349	19,767	122,150	118,801				
							From 20th December 1896 to 17th June 1897.								
DAMOH.	Marankhera and Arthkhera Tanks. (Damoh Tahsil.)	Mr. Keshodyal.	*Digging, carrying and embanking earth and soft moorum,* average lead 150 feet, lift 10 feet.	1,539,000	Per o/oo cft. 5 4	8,080	11,650	1,333	837	13,820	12,487	1·71 including gratuitous relief. 1·54 excluding gratuitous relief.	8 15	8 1	
							From 20th December 1896 to 17th June 1897.								
	Jabera and Hardua Tanks. (Damoh Tahsil.)	Mr. Keshodyal.	*Digging earth, moorum and hard moorum.* Average lead 100 feet, average lift 10 feet.	827,000	5 15	4,910	7,185	835	495	8,516	7,681	1·73 including gratuitous relief. 1·56 excluding gratuitous relief.	10 4	9 4	

DAMOH—(Concld.).

						From 2nd January 1897 to 27th June 1897.							
Jhaloni and Peera Tanks. (Damoh Tahsil.)	Mr. Makhanlal.	*Earth-work in black soil and soft moorum.* Average lift 12 feet, lead 150 feet.	2,508,000	5 8	13,794	19,104	2,795	1,869	23,768	20,973	1·72 including gratuitous relief. 1·52 excluding gratuitous relief.	9 7	8 6	
						From 21st January 1897 to 11th June 1897.							
Mala Tank. (Damoh Tahsil.)	Mr. Sheoshanker.	*Earth-work in hard soil and boulders.* Average lead 150, lift 12'.	1,342,000	7 8	10,065	17,320	2,727	2,730	22,777	20,050	2·26 including gratuitous relief. 1·99 excluding gratuitous relief.	16 15	14 15	
						From 13th January 1897 to 30th May 1897.							
Amjhir Tank. (Hatta Tahsil).	Mr. Purshottam.	*Earth-work. Digging, carrying and embanking black soil.* Average lead 100', lift 12'.	1,500,000	4 3	6,281	19,530	3,304	2,496	25,330	22,026	4·03 including gratuitous relief. 3·50 excluding gratuitous relief.	16 4	14 10	
						From 10th January 1897 to 11th June 1897.							
Patehra Tank. (Hatta Tahsil).	Mr. Raghunath Hari.	*Earth-work. Digging hard earth mixed with boulder.* Average lead 200', lift 11'.	2,292,000	9 8	21,774	32,635	4,242	5,516	42,393	38,151	1·94 including gratuitous relief. 1·75 excluding gratuitous relief.	18 7	16 10	
						From 31st January 1897 to 12th July 1897.							
Patheria Tank. (Damoh Tahsil).	Mr. Rewaram.	*Earth-work. Digging hard moorum.* Average lead 100', lift 10'.	1,146,000	8 7	9,669	10,341	3,168	1,942	15,451	12,283	1·59 including gratuitous relief. 1·27 excluding gratuitous relief.	13 7	10 10	The work was open for only weak and feeble persons from 1st February 1897 to 24th April 1897, when it was opened to all kinds of workers; thus 19 per cent. of the expenditure shown in column 8 was more in the nature of gratuitous relief than ordinary wages.
		TOTAL FOR DAMOH DISTRICT ...	...	...	74,573	117,765	18,404	15,886	152,055	133,651				

NAGPUR DISTRICT ...
WARDHA Do. ...
CHANDA Do. ...
BHANDARA Do. ...

Nil.

District.	Name of Work.	Officer-in-charge.	Description of Work.	Value of Work at Ordinary Contract Rates.			Amount Spent.					Ratio of Famine to Ordinary rates.	Famine Rates.		Remarks.
				Quantity.	Rate.	Amount.	Wages.	Gratuitous relief.	Special establishment.	Total including gratuitous relief.	Total excluding gratuitous relief.		Including gratuitous relief.	Excluding gratuitous relief.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
				Cft.	Rs. a.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Ratio.	Rs. a.	Rs. a.	
							From 26th November 1896 to 26th December 1896.								
BALAGHAT.	Balaghat Nazul road; length 7 miles.	Clerk of Court, Deputy Commissioner's Office.	*Earth-work. Digging of drains and earth-work (where necessary).*	* Cannot be ascertained	Per o/oo Cft. 3 0										* The quantity of work cannot be given as no measurements were taken at the time when work was done.
			Digging and stacking moorum at quarry.	(a) 40,700	Per o/o Cft. 0 6	153	496	...	4	500	500	1·35 including gratuitous relief. 1·35 excluding gratuitous relief.	(a) 0 8	(a) 0 8	(a) This work was done by piece in the month of December 1896, and the labourers at that time were ready to do work on even less than the ordinary rates, hence the low average of Famine rates shown in columns 14 and 15.
			Moorum carriage and stacking at road-side, ½ mile.	(a) 34,427	0 10	215	...	...	...	...	...		(a) 0 13	(a) 0 13	
			Total ...			368	496	...	4	500	500				
							From 24th April 1897 to 5th June 1897.								
	Constructing two wells at Baihar Khas.	Additional Tahsildar, Baihar.	*Earth-work* ...	11,154	Per o/oo Cft. 2 8	28						1·08 including gratuitous relief.	2 11	2 11	As the work was conducted under the direct supervision of the Tahsildar, Baihar, and as the greater part of the expenditure was on skilled labour, the Famine rates came very nearly to the contract rates.
			Masonry ...	1,549	Per o/o Cft. 16 0	248						1·08 excluding gratuitous relief.	17 4	17 4	
			Putting earth round the wells and cleaning them.	10,558	Per o/oo Cft. 2 8	26	356	...	...	356	356		2 11	2 11	
			Stone-work ...	122	Per o/o Cft. 22 0	27							23 12	23 12	
			Total ...	...	...	329	356	...	...	356	356				

BALAGHAT.—(*Concld.*)			*Earth-work.*		Per o/oo Cft.								
	Basankhar Tank ...	Mr. Lampard.	Earth-work ...	2,08,544	6 4	1,303						8 11	8 11
			Masonry Channel.		Per o/o Cft.								
			Excavation ...	1,050	5 0	52						6 15	6 15
			Concrete ...	918	13 0	119	2,700	...	...	2,700	2,700	1·39 including gratuitous relief.	
			Brick in lime masonry.	2,125	22 0	467						1·39 excluding gratuitous relief. 18 1	18 1
												30 9	30 9
			Total ...	...	...	1,941	2,700	...	...	2,700	2,700		
			TOTAL FOR BALAGHAT DISTRICT.	...	...	2,638	3,552	...	4	3,556	3,556		
HOSHANGABAD.						*From 28th March 1897 to 28th July 1897.*							
			Earth-work.		Per o/oo Cft.								
	Repairs of Sobhapur Tank (Sohagpur Tahsil.)	Balkrishna Bhagwant.	Soft soil. Lead 10' and Lift 10'.	1,738,629	4 0	6,954	8,359	833	1,778	10,970	10,137	1·57 including gratuitous relief.	6 4	5 13
												1·46 excluding gratuitous relief.	
			TOTAL FOR HOSHANGABAD DISTRICT.	...	...	6,954	8,359	833	1,778	10,970	10,137		
NIMAR.						*From 1st October 1896 to 31st December 1897.*							
			Earth-work.										
	Punasa Tank, Village Relief Work. (Khandwa Tahsil.)	H. B. Bartlett, Assistant Conservator of Forests, Nimar,	Hard soil ...	131,750	5 0	659	1,401	...	89	1,490	1,490	1·20 including gratuitous relief.	6 0	6 0
			Very hard moorum...	58,040	10 0	580						1·20 excluding gratuitous relief.	12 0	12 0
			TOTAL FOR NIMAR DISTRICT.	...	...	1,239	1,401	...	89	1,490	1,490			

District.	Name of Work.	Officer-in-charge.	Description of Work.	Value of Work at Ordinary Contract Rates.			Amount Spent.					Ratio of Famine to Ordinary rates.	Famine Rates.		Remarks.
				Quantity.	Rate.	Amount.	Wages.	Gratuitous relief.	Special establishment.	Total including gratuitous relief.	Total excluding gratuitous relief.		Including gratuitous relief.	Excluding gratuitous relief.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
				Cft.	Rs. A.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Ratio.	Rs. A.	Rs. A.	
			Earth-work.		Per o/oo Cft.										
BETUL.	Shahpur-Ranipur-Badnur Road; length 39 miles.	Mr. W. J. Bagley, Extra-Assistant Commissioner.	Soft soil ...	293,560	5 0	1,468						1·57 including gratuitous relief. 1·57 excluding gratuitous relief.	8 2	8 2	
			Hard moorum ...	16,330	7 8	122	2,072	...	518	2,590	2,590				
			Clearing stones and dressing the road surface.	700	10 0	7							12 2	12 2	
													16 3	16 3	
			Total ...	...	..	1,597	2,072	...	518	2,590	2,590				High rates due to the workers not being accustomed to road labour. These roads were finished as test works by the District Council.
			Earth-work.												
	Nimpani-Chicholi Road; length 15 miles.	Munshi Ajudhia Prasad, Naib-Tahsildar.	Soft soil ...	158,400	5 0	792	1,094	...	152	1,246	1,246	Do. do.	7 14	7 14	
			TOTAL FOR BETUL DISTRICT.	...	...	2,389	3,166	...	670	3,836	3,836				

NARSINGHPUR DISTRICT.

Nil.

CHHINDWARA.

						From 15th February 1897 to 20th June 1897.							
		Earth-work.											
Construction of Umrith-Bhatoria Road; length 10 miles. (Chhindwara Tahsil.)	Muhammad Akbar and Maroti Laxman.	Ordinary soil. Lead under 50′ and Lift under 5′.	892,600	3 2	2,789							3 9	3 6
		Moorum ...	702,000	8 12	6,142	10,973	457	1,290	12,720	12,263	1·13 including gratuitous relief. 1·09 excluding gratuitous relief.	9 14	9 9
		Surface dressing ...	261,360	3 0	784							3 6	3 4
				Per o/o Cft.									
		Stone digging and cutting.	52,000	3 0	1,560							3 6	3 4
		Total ..	...	...	11,275	10,973	457	1,290	12,720	12,263			
						From 27th January 1897 to 10th June 1897.							
		Earth-work.		Per o/oo Cft.									
Constructing a Bund on the Major Nala at Tamia to form a tank. (Chhindwara Tahsil.)	Mazhar Ali...	Forming Bund ...	392,000	7 8	2,940	5,587	149	523	6,259	6,110		11 2	10 14
		Escape channel ...	354,000	4 0	1,416	797	...	...	797	797	1·48 including gratuitous relief.	5 15	5 13
				Per o/o Cft.									
		Dry stone work by contract.	5,000	8 0	400						1·45 excluding gratuitous relief.	11 13	11 10
		Total ...	...	...	4,756	6,384	149	523	7,056	6,907			
		TOTAL FOR CHHINDWARA DISTRICT.	...	...	16,031	17,357	606	1,813	19,776	19,170			

District.	Name of Work.	Officer-in-charge.	Description of Work.	Value of Work at Ordinary Contract Rates.			Amount Spent.					Ratio of Famine to Ordinary rates.	Famine Rates.		Remarks.
				Quantity.	Rate.	Amount.	Wages.	Gratuitous relief.	Special establishment.	Total including gratuitous relief.	Total excluding gratuitous relief.		Including gratuitous relief.	Excluding gratuitous relief.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
				Cft.	Rs. A.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Ratio.	Rs. A.	Rs. A.	
RAIPUR.			*Earth-work.*		Per o/oo Cft.		*From 19th April 1897 to 28th May 1897.*								
	Chamridabri Tank...	Secretary, Municipality.	Lead under 300′ and Lift under 5.′	5,714	4 6	25	1,510	47	132	1,689	1,642	1·33 including gratuitous relief.	5 13	5 10	
					Per o/o Cft.							1·29 excluding gratuitous relief.			
			Moorum soil. Lead under 300′ and Lift under 5.′	220,848	0 9	1,242							0 12	0 12	
			Total ...	...	...	1,267	1,510	47	132	1,689	1,642				
			Moorum-work.				*From 27th April 1897 to 10th August 1897.*								
	Lendi Tank ...	Secretary, Municipality.	Lead under 400′ and Lift under 5.′	350,036	1 1	3,719	8,226	1,007	1,247	10,480	9,473	1·77 including gratuitous relief.	1 14	1 11	
					Per o/oo Cft.							1·60 excluding gratuitous relief.			
			Earth-work. Lead under 400′ and Lift under 5.′	250,724	8 12	2,194							15 7	14 0	
			Total ...	...	...	5,913	8,226	1,007	1,247	10,480	9,473				

		Earth-work.				*From 1st March 1897 to 28th June 1897.*							
Sanjari Tank ...	Mr. J. R. Scott, Assistant Settlement Officer.	Excavation, soft soil.	1,276,425	3 0	3,829	3,000	...	...	3,000	3,000	·77 excluding gratuitous relief.	2 5	2 5
		Earth-work.				*From 10th March 1897 to 14th June 1897.*							
Resali Tank ...	Do. ...	Excavation, soft soil.	121,500	3 0	364	300	...	...	300	300	·82 excluding gratuitous relief.	2 7	2 7
						From 19th January 1897 to 15th July 1897.							
Baloda Tank ...	Mr. Ganga Singh, Extra-Assistant Commissioner.	*Earth-work* ...	476,512	3 12	1,787	2,716	...	119	2,835	2,835	1·6 excluding gratuitous relief.	5 15	5 15
						From 22nd February 1897 to 10th May 1897.							
Khamardili Tank ...	Do. ...	Do. ...	106,400	3 12	399	474	...	26	500	500	1·3 „ „	4 11	4 11
						From 13th May 1897 to 15th June 1897.							
Tarasive Tank ...	Do. ...	Do. ...	204,120	2 8	510	486	...	14	500	500	1·00 „ „	2 8	2 8
						From 22nd February 1897 to 16th June 1897.							
Baloda Tank ...	Do. ...	Do. ..	156,744	2 8	392	687	...	13	700	700	1·8 „ „	4 6	4 6

District.	Name of Work.	Officer-in-charge.	Description of Work.	Value of Work at Ordinary Contract Rates.			Amount Spent.					Ratio of Famine to Ordinary rates.	Famine Rates.		Remarks.
				Quantity.	Rate.	Amount.	Wages.	Gratuitous relief.	Special establishment.	Total including gratuitous relief.	Total excluding gratuitous relief.		Including gratuitous relief.	Excluding gratuitous relief.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
				Cft.	Rs. A. Per o/oo Cft.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Ratio.	Rs. A.	Rs. A.	
RAIPUR.—(*Contd.*)							*From 22nd February 1897 to 27th March 1897.*								
	Cherkapur Tank ...	Mr. Ganga Singh, Extra-Assistant Commissioner.	*Earth-work* ...	2,17,392	2 8	543	636	1	11	648	647	1·1 excluding gratuitous relief.	2 12	2 12	
							From 15th February 1897 to 16th March 1897.								
	Khairi Tank ...	Do. ...	Do. ...	55,860	2 8	140	132	...	1	133	133	0·9 „ „	2 4	2 4	
							From 12th February 1897 to 12th March 1897.								
	Dhaorabhata Tank.	Do. ...	Do. ...	83,580	2 8	209	193	3	4	200	197	0·9 „ „	2 4	2 4	
							From 26th February 1897 to 31st October 1897.								
	Morid Tank ...	Mr. P. C. Lall, Assistant Engineer.	*Earth-work, soft and hard soils.*	650,075	3 12	2,438	5,766	17	172	5,955	5,938	2·12 including gratuitous relief.	7 15	7 15	
			Do. ...	74,461	5 0	372						2·11 excluding gratuitous relief.	10 9	10 9	
			Total ...	...	...	2,810	5,766	17	172	5,955	5,938				

RAIPUR.—(*Contd.*)

						From 2nd May 1897 to 10th July 1897.							
Nara Tank Work ...	Mr. F. S. Cowie, Assistant Commissioner.	*Earth-work* ...	106,468	2 5	247	250	26	...	276	250	1·1 including gratuitous relief. 1·0 excluding gratuitous relief.	2 9	2 5
						From 19th February 1897 to 19th May 1897.							
Bhatia Tank Work..	Do. ...	Do. ...	168,106	2 5	389	394	56	...	450	394	1·1 including gratuitous relief. 1·0 excluding gratuitous relief.	2 9	2 5
						From 6th March 1897 to 10th August 1897.							
Sankra Tank Work.	Do. ...	Do. ...	278,445	2 5	643	640	154	...	794	640	1·2 including gratuitous relief. 1·0 excluding gratuitous relief.	2 13	2 5
						From 25th February 1897 to 22nd July 1897.							
Pathrakuri Tank Work.	Do. ...	Do. ...	147,861	2 5	342	340	45	...	385	340	1·1 including gratuitous relief. 1·0 excluding gratuitous relief.	2 9	2 5
						From 10th April 1897 to 30th August 1897.							
Mandhar Tank Work.	Do. ...	Do. ...	402,832	2 5	932	943	390	...	1,333	943	1·4 including gratuitous relief. 1·0 excluding gratuitous relief.	3 4	2 5

District.	Name of Work.	Officer-in-charge.	Description of Work.	Value of Work at Ordinary Contract Rates.			Amount Spent.					Ratio of Famine to Ordinary rates.	Famine Rates.		Remarks.
				Quantity.	Rate.	Amount.	Wages.	Gratuitous relief.	Special establishment.	Total including gratuitous relief.	Total excluding gratuitous relief.		Including gratuitous relief.	Excluding gratuitous relief.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
				Cft.	Rs. A. Per 0/00 Cft.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Ratio.	Rs. A.	Rs. A.	
							From 29th January 1897 to 17th October 1897.								
RAIPUR.—(*Contd.*)	Simga Tank Work..	Mr. J. May, Extra-Assistant Commissioner.	*Earth-work, soft and hard soils.*	1,600,000	5 0	8,000	14,279	200	511	14,990	14,790	1·8 including gratuitous relief. 1·8 excluding gratuitous relief.	9 0	9 0	
							From 15th March 1897 to 25th July 1897.								
	Gandadih Tank work.	Do. ...	*Earth-work* ...	179,466	3 12	673	673	...	...	673	673	1·00 excluding gratuitous relief.	3 12	3 12	
							From 18th March 1897 to 1st August 1897.								
	Khaisora Tank Work.	Do. ...	Do. ...	108,000	3 12	405	405	...	...	405	405	1·00 „ „	3 12	3 12	
							From 10th May 1897 to 19th June 1897.								
	Gallu Tank Work..	Mr. Raghunath Rao, Tahsildar, Raipur.	Do. ...	128,000	3 2	400	400	29	...	429	400	1·07 including gratuitous relief. 1·00 excluding gratuitous relief.	3 5	3 2	
							From 30th May 1897 to 27th November 1897.								
	Kowajbar Tank Work.	Do. ...	Do. ...	433,585	3 2	1,355	1,355	216	...	1,571	1,355	1·1 including gratuitous relief. 1·0 excluding gratuitous relief.	3 7	3 2	

						From 27th May 1897 to 22nd June 1897.							
Ganj Work ...	Secretary, Municipality.	Do. ...	413,512	Per o/o Cft. 0 9	2,326	3,009	239	82	3,330	3,091	1·43 including gratuitous relief. 1·33 excluding gratuitous relief.	0 13	0 12
						From 10th April 1897 to 1st June 1897.							
Rajatalao Tank Work.	Mr. Barclay, Extra-Assistant Commissioner.	*Hard earth-work mixed with moorum.*	132,852	0 8	664	931	...	70	1,001	1,001	1·51 including gratuitous relief. 1·51 excluding gratuitous relief.	0 12	0 12
						From 13th July 1897 to 31st October 1897.							
Ganj Work ...	District Superintendent of Police.	Do. ...	118,965	0 12	892	2,010	1,463	292	3,765	2,302		3 10	1 15
		Balrigari grass ...	600,000	0 ¾	282	531	...	32	563	563	4·22 including gratuitous relief. 2·58 excluding gratuitous relief.	0 3	0 2
		Cleaning of field ...	259,500	0 1	162	301	...	23	324	324		0 4	0 2
		Lepar Asylum ...	...	...	...	...	750	...	750	...		...	...
		Total ...	...	...	1,336	2,842	2,213	347	5,402	3,189			
						From 11th August 1897 to 10th September 1897.							
Dhamtari Feeder Line.	Deputy Commissioner.	*Earth-work* ...	9,166	Per o/oo Cft. 5 0	46							5 0	5 0
		Do. ...	422,159	4 12	2,005	2,472	...	16	2,488	2,488	1·00 excluding gratuitous relief.	4 12	4 12
		Do., moorum ...	67,408	6 4	421							6 4	6 4
		Total ...	...	...	2,472	2,472	...	16	2,488	2,488			

District.	Name of Work.	Officer-in-charge.	Description of Work.	Value of Work at Ordinary Contract Rates.			Amount Spent.					Ratio of Famine to Ordinary rates.	Famine Rates.		Remarks.
				Quantity.	Rate.	Amount.	Wages.	Gratuitous relief.	Special establishment.	Total including gratuitous relief.	Total excluding gratuitous relief.		Including gratuitous relief.	Excluding gratuitous relief.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
				Cft.	Rs. A.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Ratio.	Rs. A.	Rs. A.	
					Per o/oo Cft.	*From 4th July 1897 to 7th July 1897.*									
RAIPUR.—(*Concld.*)	Kankali Tank Work.	Secretary, Municipal.	*Earth-work* ..	15,890	5 15	94	106	...	...	106	106	1·00 excluding gratuitous relief.	5 15	5 15	
			Moorum ...	1,770	6 14	12							6 14	6 14	
			Total ...	...	...	106	106	...	...	106	106				
			TOTAL FOR RAIPUR DISTRICT.	...	...	38,453	53,165	4,643	2,765	60,573	55,930				
						From 27th Feburary 1897 to 31st October 1897.									
BILASPUR.	Constructing a new Tank at Dhuma, (Bilaspur Tahsil).	Ram Rao ...	*Earth-work, soft* ...	303,800	4 8	1 367							5 15	5 15	
			Do., hard ...	129,700	5 0	649							7 8	7 8	
			Moorum, soft ...	50,000	6 4	313							9 6	9 6	
			Do., hard ...	11,160	7 8	84							11 4	11 4	
			Hard-stone breaking.	38,130	Per o/o Cft 3 8	1,335	5,311	27	474	5,812	5,785	1·5 including gratuitous relief.	5 4	5 4	
				Chains.	Per Chain.							1·5 excluding gratuitous relief.			
			Drains ...	221	0 8	110							0 12	0 12	

		Repairing Tank ...	16	3 0	48							4 8	4 8	
		Laying out ...	84	Per o/o Chains. 2 8	2							3 12	3 12	
		Total ...	...	...	3.908	5,311	27	474	5,812	5,785				
						From 24th April 1897 to 30th August 1897.								
		Earth-work.		Per o/oo Cft.										
Constructing a new Tank at Bhattapara, (Bilaspur Tahsil).	Jawahir Lall.	Soft and hard soil ..	524.334	3 12	1.966							2 14	2 14	
		Moorum ...	213 510	5 0	1,068							3 13	3 13	
		Moorum and boulders.	4.387	7 8	33	2,747	...	223	2,970	2.970	0·76 including gratuitous relief. 0·76 excluding gratuitous relief.	5 11	5 11	The work was done by the *dagni* system (piece-work) : hence very low rates.
		Blasting ...	42,089	20 0	842							15 3	15 3	
		Total ...	..	..	3.909	2,747	...	223	2,970	2.970				
						From 3rd May 1897 to 25th July 1897.								
Constructing a new Tank at Pasid, (Bilaspur Tahsil).	Local Contractor, Gokul Prasad.	*Soft and hard soil..*	171,956	3 12	645							3 6	3 6	
		Moorum ...	43.425	5 0	217	672	...	105	777	777	0·90 including gratuitous relief. 0·90 excluding gratuitous relief.	4 8	4 8	Do.
		Total ...	...	...	862	672	...	105	777	777				

District.	Name of Work.	Officer-in-charge.	Description of Work.	Value of Work at Ordinary Contract Rates.			Amount Spent.					Ratio of Famine to Ordinary rates.	Famine Rates.		Remarks.
				Quantity.	Rate.	Amount.	Wages.	Gratuitous relief.	Special establishment.	Total including gratuitous relief.	Total excluding gratuitous relief.		Including gratuitous relief.	Excluding gratuitous relief.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
				Cft.	Rs. A.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Ratio.	Rs. A.	Rs. A.	
BILASPUR.—(*Contd.*)			*Earth-work.*		Per 0/00 Cft.		*From 16th April 1897 to 13th June 1897.*								
	Constructing a new Tank at Janjee, (Bilaspur Tahsil).	Local Contractor Ram Narain Lall.	Soft and hard soil...	256,725	3 12	963	944	...	103	1,047	1,047	0·73 including gratuitous relief.	2 12	2 12	The work was done by the *dagni* system (piece-work): hence very low rates.
			Moorum ...	93,164	5 0	466						0·73 excluding gratuitous relief.	3 10	3 10	
			Total ...	...	...	1,429	944	...	103	1,047	1,047				
							From 13th May 1897 to 22nd September 1897.								
	Constructing a new Tank at Baksara, (Bilaspur Tahsil).	Local Contractor, Ram Lall Baboo.	*Soft and hard soil.*	550,040	3 12	2,063	1,324	...	128	1,452	1,452	0·70 including gratuitous relief. 0·70 excluding gratuitous relief.	2 10	2 10	Do.
							From 21st May 1897 to 5th August 1897.								
	Constructing a new Tank Baraduar, (Janjgir Tahsil).	Local Contractor Sardharam.	*Soft and hard soil.*	317,053	3 12	1,189	705	...	85	790	790	0·66 including gratuitous relief. 0·66 excluding gratuitous relief.	2 8	2 8	Do.

BILASPUR.—(*Contd.*)

		Earth-work.				*From 1st March 1897 to 10th July 1897.*									
Constructing a New Tank at Hardee, (Janjgir Tahsil).	Lakhan *Patel.*	Soft and hard soil ...	75,543	3 12	283	168	...	...	168	163	0·60 including gratuitous relief. 0·60 excluding gratuitous relief.	2 4	2 4	Do.
		Earth-work.				*From 27th February 1897 to 10th July 1897.*									
Constructing a New Tank at Daree, (Janjgir Tahsil).	Dhansai *Patel.*	Soft and hard soil...	206,775	3 12	775	450	...	...	450	450	0·58 including gratuitous relief. 0·58 excluding gratuitous relief.	2 3	2 3	Do.
		Earth-work.				*From 6th February 1897 to 10th August 1897.*									
Constructing a New Tank at Damendpur, (Bilaspur Tahsil).	Heraman *Patel.*	Soft and hard soil ...	408,770	3 12	1,533	1,000	...	..	1,000	1,000	0·65 including gratuitous relief. 0·65 excluding gratuitous relief.	2 7	2 7	Do.
		Earth-work.				*From 8th February 1897 to 1st August 1897.*									
Constructing a New Tank at Bargan, (Bilaspur Tahsil).	Saliggangaram *Patel.*	Soft and hard soil ...	216,731	3 12	813	457	...	...	457	457	0·56 including gratuitous relief. 0·56 excluding gratuitous relief.	2 2	2 2	Do.
		Earth-work.				*From 30th April 1897 to 16th July 1897.*									
Digging a ditch round the fuel and fodder reserve at Bhaiso, (Janjgir Tahsil).	Local Contractor, Mangal Pershad.	Soft soil ...	179,650	3 0	539	465	...	60	525	525	0·97 including gratuitous relief. 0·97 excluding gratuitous relief.	2 15	2 15	Do.

District.	Name of Work.	Officer-in-charge.	Description of Work.	Value of Work at Ordinary Contract Rates.			Amount Spent.					Ratio of Famine to Ordinary rates.	Famine Rates.		Remarks.
				Quantity.	Rate.	Amount.	Wages.	Gratuitous relief.	Special establishment.	Total including gratuitous relief.	Total excluding gratuitous relief.		Including gratuitous relief.	Excluding gratuitous relief.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
BILASPUR.—(*Concld.*)				Cft.	Rs. A.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Ratio.	Rs. A.	Rs. A.	
			Earth-work.		Per 0/00 Cft.	*From 30th April 1897 to 15th July 1897.*									
	Digging a ditch round the Fuel and Fodder Reserve at Pakaria, (Janjgir Tahsil).	Local Contractor, Ganesh Pershad.	Soft soil ...	307,867	3 0	924	875	...	85	960	960	1·04 including gratuitous relief. 1·04 excluding gratuitous relief.	3 2	3 2	
			Earth-work.			*From 20th May 1897 to 31st October 1897.*									
	Filling up Dabri at (Bilaspur Tahsil).	District Fund Overseer.	Soft soil. Carrying soil ¼ mile.	8,428	15 0	126	3,633	...	370	4,003	4,003	0·98 including gratuitous relief.	14 11	14 11	
			Sand ...	396,072	10 0	3,961						0·98 excluding gratuitous relief.	9 13	9 13	
			Total ...	...	...	4,087	3,633	...	370	4,003	4,003				
			TOTAL FOR BILASPUR DISTRICT.	...	...	22,314	18,751	27	1,633	20,411	20,384				
	SAMBALPUR DISTRICT.						*Nil.*								
			TOTAL FOR THE CENTRAL PROVINCES.			3,58,230	6,47,849	51,919	84,387	7,84,155	7,32,236				

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